TESTS: Honda Nighthawk 650, Maico 490 Enduro, Yamaha Seca 400, Kawasaki KZ750 LTD, Suzuki DR250

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SPECIAL EDITION

CYCLE GUIDE

SPECIAL EDITION:

Performance Additives

EXCLUSIVE TEST:

1983 HONDA NIGHTHAWK 650

12.28-SECOND QUARTER

World's quickest 650

Outrageous performance

L0876603600 MAR84 CYCL
LARRY LAWRENCE H21 DIR
5341 NORCROFT DR BXD
INDIANAPOLIS IN 46241

BONUS:

Preview of Honda's And Yamaha's Hottest 1983 Models

0 71896 47457

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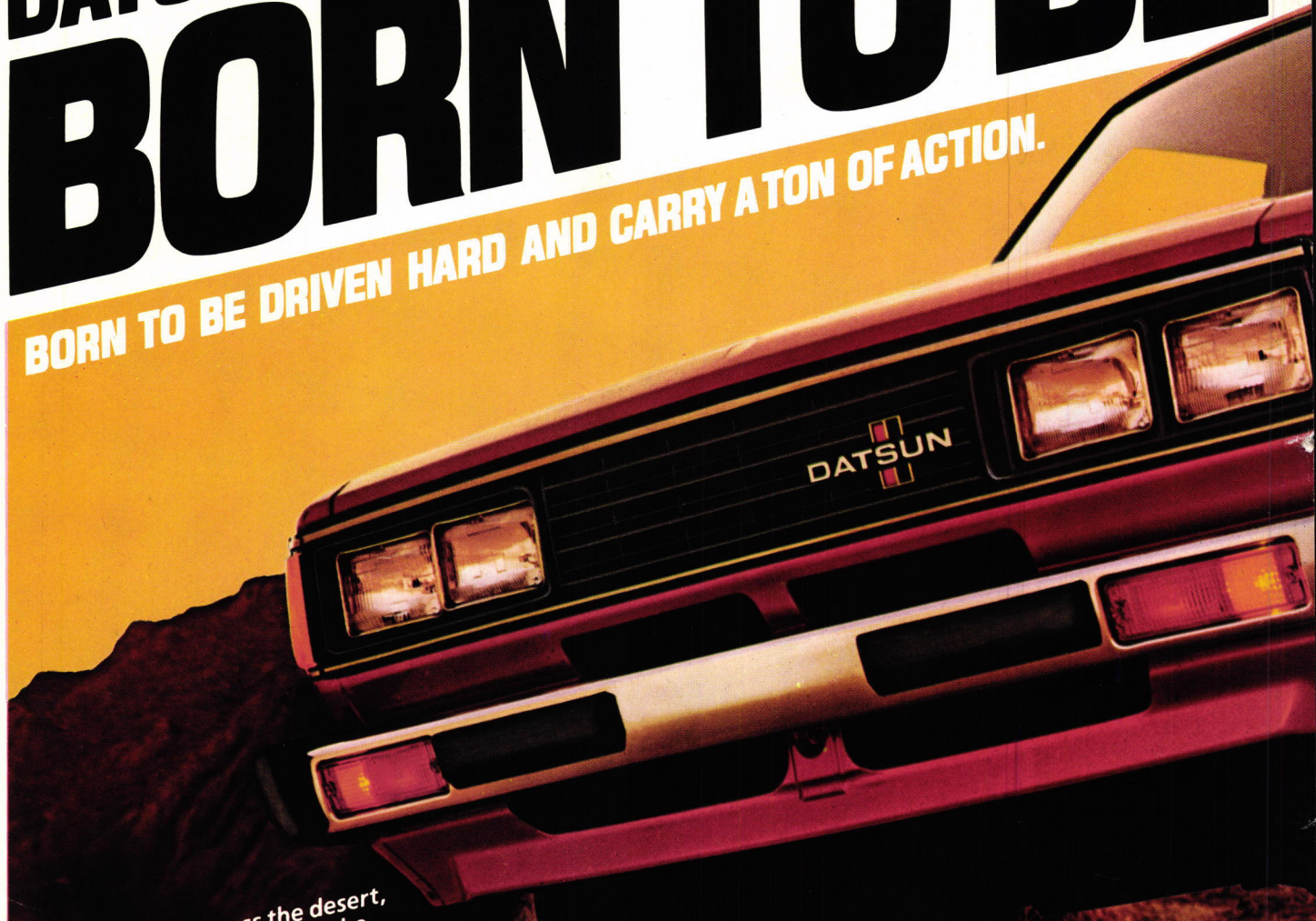
DATSUN HEAVY-DUTY LONG BED:
BORN TO BE

BORN TO BE DRIVEN HARD AND CARRY A TON OF ACTION.



Ride a dirt bike across the desert, boogie a dune buggy along the beach...or tote a bed of bricks to the job site.

But before you can go for it, you've got to get to the designated area.

That's the kind of hauling the Datsun Heavy-Duty Long Bed was born for—adventures as big as its payload: 2,100 pounds.

Over a ton! And with the muscle to move it: 2.2 liters of twin-ignited, crossflow-hemihead NAPS-Z guts; on rugged 8-ply tires, beefed-up rear springs and front stabilizer bar.

Plus the long bed to haul bikes with the tailgate closed and the quality, built in by Nissan, to go the distance. Is it any wonder over the past 22 years truckers have bought over a quarter of a million more Datsuns than Number Two?

Any truck can haul you to work. The Datsun Heavy-Duty Long Bed was born to be driven to the action.

31 EST. HWY MPG | 25 EPA EST. MPG

Use estimated mpg for comparison with standard 4-speed. Actual mpg may differ depending on speed, trip length and weather. Hwy mpg will probably be less. California mpg lower.

DATSUN
WE ARE DRIVEN

THE NAME OF QUALITY
NISSAN
NISSAN MOTORS

Product of NISSAN

DRIVEN!

SPECIFICATIONS.	
Wheelbase (in.)	110.8
Length (in.)	187.0
Width (in.)	63.4
Height (in.)	61.8
Turning circle (curb to curb, ft.)	34.1
Min. ground clearance (in.)	7.9
Curb weight (lbs., Federal)	2585
Max. GVWR	4800
Payload (lbs.)	2100
Fuel capacity (gal.)	16.9
Bed length (in.)	88.8
Bed width (in.)	56.9
Bed depth (in.)	15.6
Horsepower @ 5200 RPM	98
Torque @ 2800 RPM	127
Engine displ. (liters) 4-cyl. NAPS-Z	2.2
Transmission, manual, speeds	4
Battery, maintenance-free (amp/hrs)	60
EQUIPMENT.	
Frame	ladder-type
Brakes	power-assist front disc/rear drum
Wheels & tires	5J14, E78 14/8 bias ply
Front suspension	independent adjustable torsion bars

CYCLE GUIDE'S CYCLE GUIDE

Cycle Guide's catalog of recent test hardware—no brag, just fact.

OFF-ROAD

MAKE & MODEL	ISSUE	TYPE	ENGINE TYPE	WHEEL TRAVEL, IN. FRONT/REAR	WEIGHT, LBS	RAKE/TRAIL, DEGREES/INCHES	GEARS
Honda CR250R-'82	May '82	Motocross	Two-stroke	11.4/12.0	228	27.5/4.3	5
Honda CR480R-'82	April '82	Motocross	Two-stroke	11.5/12.0	232	27.2/4.2	4
Honda XR250R-'82	December '81	Enduro	Four-stroke	9.5/10.5	274	NA	5
Honda XR500R-'82	November '81	Enduro	Four-stroke	9.5/10.0	289	28.0/4.4	5
Husqvarna 250WR-'82	June '82	Enduro	Two-stroke	10.6/10.7	236	30.0/6.0	6
Husqvarna 430CR-'82	July '82	Motocross	Two-stroke	11.8/12.0	232	30.5/6.0	6
Husqvarna 500CR-'82	October '82	Motocross	Two-stroke	11.8/12.0	239	30.5/6.0	4
Kawasaki KDX175-'82	September '82	Enduro	Two-stroke	9.6/10.5	227	28.0/4.7	6
Kawasaki KX125-'82	November '82	Motocross	Two-stroke	11.2/11.4	200	28.0/4.8	6
Kawasaki KX250-'82	May '82	Motocross	Two-stroke	11.2/11.3	220	30.0/5.1	5
KTM 495 MC-'82	July '82	Motocross	Two-stroke	11.3/12.1	247	27.5/4.8	5
Maico Alpha 1 490-'82	July '82	Motocross	Two-stroke	11.6/11.5	248	28.5/5.0	5
Maico 490 E-'83	December '82	Enduro	Two-stroke	11.9/12.6	261	27.5/4.6	5
Suzuki DR250-'82	December '82	Trail	Four-stroke	9.7/10.3	259	28.2/4.6	5
Suzuki DR500-'82	November '81	Trail	Four-stroke	8.6/8.2	290	NA	5
Suzuki PE175-'82	September '82	Enduro	Two-stroke	10.0/9.8	229	28.0/4.4	6
Suzuki RM125-'82	November '82	Motocross	Two-stroke	11.2/12.6	197	29.5/4.8	6
Suzuki RM250-'82	May '82	Motocross	Two-stroke	10.6/12.3	217	29.3/4.8	5
Suzuki RM465-'82	April '82	Motocross	Two-stroke	10.8/12.0	234	29.3/4.8	4
Yamaha IT175-'82	August '82	Enduro	Two-stroke	10.2/11.2	216	28.5/4.9	6
Yamaha YZ250-'82	May '82	Motocross	Two-stroke	11.0/11.0	235	27.5/4.7	5
Yamaha YZ490-'82	April '82	Motocross	Two-stroke	11.3/12.8	238	28.5/4.7	4

STREET

MAKE & MODEL	ISSUE	ENGINE TYPE*	DISPLACEMENT, CC	QUARTER-MILE, SEC./MPH	TOP SPEED, MPH	WEIGHT, LBS	FUEL CONSUMPTION, MPG	STOPPING DISTANCE FROM 60 MPH, FT.
BMW R65 LS-'82	April '82	2C/G	649.6	14.15/92.4	110	417	35-50	138
BMW R80 G/S-'81	November '81	2C/G	797.5	14.07/92.3	105	405	36-54	NA
BMW R100RS-'81	May '81	2C/G	979.9	13.48/98.4	127	492	34-52	145
BMW R100RT-'82	May '82	2C/G	979.9	13.86/95.1	122	523	35-50	148
H-D FLH Classic-'82	August '82	45-deg. 2D/F	1338.6	15.47/82.0	101	752	32-42	180
H-D FXRS-'82	December '81	45-deg. 2D/F	1338.6	13.92/93.1	109	594	40-47	124
Honda CBX400F-'82	October '82	4A/F	399.1	13.59/96.5	110	402	34-58	128
Honda CB650SC-Nighthawk-'83	December '82	4A/G	656.0	12.28/108.0	122	451	28-51	128
Honda CB750F-'81	June '81	4A/F	748.7	12.40/108.3	118	526	38-53	126
Honda CB900F-'81	July '81	4A/F	901.8	12.21/111.1	141	547	41-47	130
Honda CB1100R-'81	November '81	4A/F	1062.1	NA	155	518	31-48	NA
Honda CBX-'81	May '81	6A/F	1046.9	12.01/113.9	136	646	23-40	130
Honda CX500 Turbo-'81	September '81	80-deg. 2E/G	496.9	NA	136	549	NA	NA
Honda FT500 Ascot-'82	August '82	1B/F	497.7	14.92/83.7	97	360	47-54	146
Honda GL500 Interstate-'81	August '81	80-deg. 2E/G	496.9	14.88/86.4	96	517	39-53	140
Honda GL1100-'81	April '82	4C/G	1085.0	12.60/106.5	139	606	41-49	NA
Honda GL1100A Aspencade-'82	April '82	4C/G	1085.0	13.23/98.8	139	724	40-50	145
Honda GL1100I Interstate-'82	April '82	4C/G	1085.0	13.30/99.5	139	697	40-50	NA
Honda Nighthawk 750-'82	March '82	4A/F	748.7	12.74/103.8	131	543	36-49	128
Honda V45 Magna-'82	June '82	4D/G	748.1	12.34/105.9	129	507	30-46	124
Honda V45 Sabre-'82	June '82	4D/G	748.1	12.37/106.8	128	511	29-47	149
Kawasaki GPz550-'82	November '82	4A/F	553.8	13.20/99.6	132	437	43-61	132
Kawasaki GPz1100-'82	May '82	4A/F	1089.9	11.33/119.4	137	534	35-48	127
Kawasaki KZ750-'81	June '81	4A/F	738.0	12.43/108.2	128	471	38-60	128
Kawasaki KX750LTD-'82	December '82	4A/F	739.0	12.56/105.3	131	474	41-55	131
Kawasaki KZ1000J-'81	February '81	4A/F	998.6	11.62/116.3	130	521	30-51	135
Kawasaki KZ1000R-'82	November '82	4A/F	998.6	11.85/116.7	134	505	35-49	129
Kawasaki KZ1100A-'81	April '81	4A/G	1089.9	11.62/117.6	142	559	38-44	NA
Kawasaki KZ1100 Spectre-'82	March '82	4A/G	1089.9	11.96/110.4	142	553	36-44	132
Suzuki GS550M Katana-'82	August '82	4A/F	549.7	13.69/95.9	120	449	39-53	135
Suzuki GS650GL-'82	July '82	4A/G	673.9	NA	123	472	49-61	NA
Suzuki GS750E-'82	January '82	4A/F	747.4	12.01/109.1	127	519	34-49	127
Suzuki GS1000S Katana-'81	December '81	4A/F	997.5	11.40/118.7	141	525	33-51	129
Suzuki GS1100E-'82	May '82	4A/F	1074.9	11.20/119.3	141	530	37-49	132
Suzuki GS1100G-'82	September '82	4A/G	1074.9	11.92/114.2	137	555	42-48	138
Suzuki GS1100GK-'82	October '82	4A/F	1074.9	12.58/104.5	137	647	31-44	155
Suzuki XN85 Turbo-'82	July '82	4A/F	673.9	NA	135	492	NA	NA
Yamaha XS400 Seca-'82	December '82	2A/F	399.4	14.50/89.2	110	382	47-57	140
Yamaha 550 Seca-'82	February '82	4A/F	528.7	NA	121	418	41-55	NA
Yamaha 750 Seca-'81	June '81	4A/G	748.6	12.26/108.0	128	495	44-56	134
Yamaha XJ650 Seca-'82	September '82	4A/G	653.4	12.83/103.4	125	469	44-59	135
Yamaha XJ650LJ Turbo-'82	September '82	4A/G	653.4	12.61/104.6	126	541	39-51	145
Yamaha XS400 Maxim-'82	November '82	2A/F	399.4	14.65/89.3	104	376	52-61	136
Yamaha 750 Virago-'82	January '82	75-deg. 2D/G	748.8	13.28/99.8	105	481	43-48	132
Yamaha 920 Virago-'82	February '82	75-deg. 2D/G	920.0	12.94/101.6	108	514	36-49	134
Yamaha XV920R-'82	February '82	75-deg. 2D/F	920.0	13.10/100.4	112	509	37-51	128

***A**-Transverse Vertical, **B**-Vertical, (single-cylinder only), **C**-Horizontally Opposed, **D**-Tandem Vee, **E**-Transverse Vee, **F**-Chain Final Drive, **G**-Shaft Final Drive, **H**-Belt Final Drive

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QUOTE: "Imagine a monkey in high heels and you've got your average dual-purpose bike, right? But the minute somebody mentions going to Uncle Perry's place, all us purists are sprinting for the garage, shoehorn and bananas in hand."

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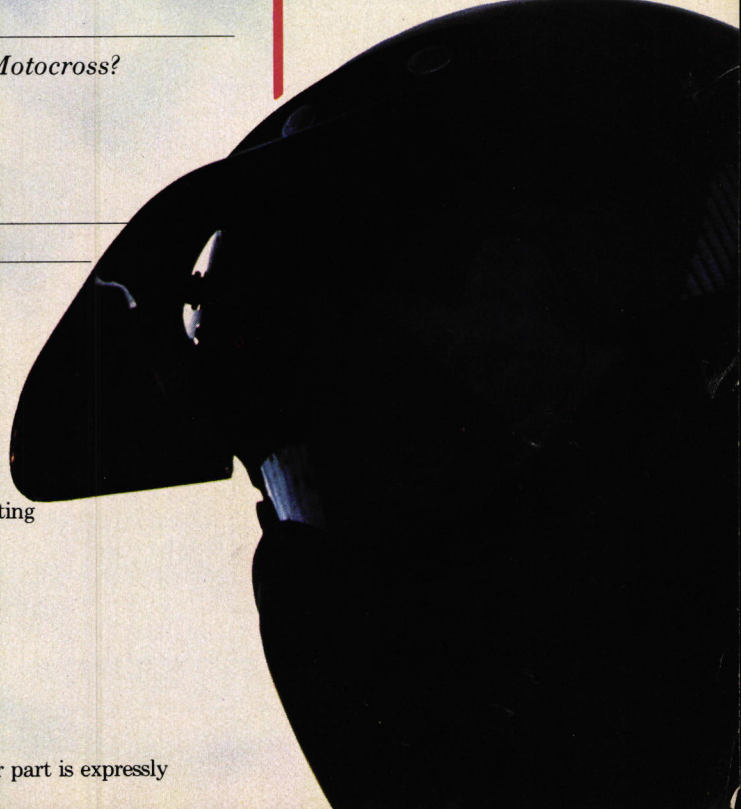
ON THE COVER:
Honda calls it the Sport-Custom Nighthawk, but we just call it the world's quickest 650. Cameron Fuji calls it a wrap.



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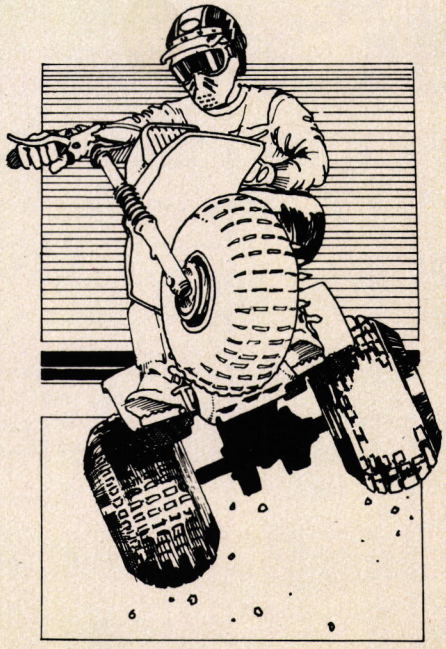


West's Side

Heaven Can't Wait

In the Back Room of Heaven, you get what you deserve . . . .

• Let me tell you what it's like. You walk into the Back Room and there, laid out before your eyes, is every brand-new street and dirt bike you were ever even moderately curious to ride. You see fire-breathing Open-classers, dry-toast commuters, beer-belly tourers, turbo time-sleds—all of them clean and shiny, all gassed up, all with the keys in them.

And the guy in the corner with the shop rag in his back pocket doesn't *grrr* at you when you walk in. He doesn't even look twice. His quick little nod says, "Take any one you want—you're one of us."

That's what it's like.

And, no, you haven't died and gone to Heaven, you're still in Torrance, California—which is quite another matter. Then again, perhaps the only practical difference between Heaven and Torrance is that once you've chosen a bike and rocketed out the Back Room of Heaven, there's no need for a helmet and leathers. I mean, who ever heard of a milk-and-honey rash? And if Heaven is everything it's cracked up to be, they don't allow Buicks at all.

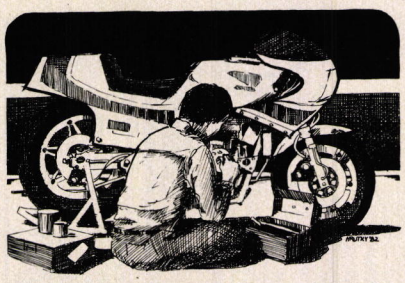
Apart from leading a tediously virtuous life and being eternally rewarded, then, the closest thing to Heaven this side of the Great Doze is the Back Room at CYCLE GUIDE. The problem is, I get into this brain-blitzing little barn only on rare occasions when I come out to California from New York, so every time I do, it feels like marrying into the Rockefellers, an embarrassment of riches—sensuous, delicious, wretched excess. And all available for the turn of a key, the press of a starter button.

The most heavenly part is, there's not one single item back there that says Doan Touch. Quite the contrary, the minute you walk in, everything straightens up, checks its seams, gives you a leering grin. The air is heavy with low, steamy murmurings . . . hi there, sailor, wanna party?

No wonder I never see any minors back there.

We're all grown-ups here, though—or at least, we all have false I.D.s—so I'll tell you more. The truth is, I'm just like you when it comes to the Back Room. I don't get in there often enough to be jaded. And every time I walk into the place, I feel like a very bad boy in God's Own Female Spare Parts Bin.

The guy with the shop rag generally keeps an eye on me, it's true. He knows something's up. But I sit on a saddle any-



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way. He grins. I grab the bars and rock the bike off its sidestand to vertical. It happens that I've landed on a silver Yamaha Seca Turbo, and he keeps on grinning. With difficulty, I force myself not to work the throttle and go, *"Screee, screeeee, ah, scuhreeeeeee. . . ."*

"Fun bike," he says, nodding. "Gonna take it?"

Take it? I think with a shiver. Then, ice cubes in the bottom of my shorts, I say, "Hm, yeah, I'm gonna take it." He nods, goes right on polishing whatever he's polishing.

And I have to ask myself again . . . but, one whiff gives me the answer. Unless Heaven has oil refineries, it's still Torrance.

I'm starting to get the hang of the Back Room now, though. I set the Turbo back on its sidestand and look around some. Hell, maybe I *really can* have any bike I want. I walk down the line-up, the depth of it sinking in—this place is like a cure for herpes: *incredible!*

I swing a leg over a new, gleaming-red Kawasaki GPz550. *"Fazzzz, faazzz, faaaazz,"* I think, running through the gears. Nice. I set it down and move to the new, gleaming-red Kawasaki GPz1100 right next to it. *"Flazz-flazz, fooooooooo-zzzzzz. . . ."* Nicer—and no speeding ticket.

But the difficulty is becoming clearer already—it's not, which bike do I want to ride today, but *who am I today?*

I look at the big, black Suzuki GS1100GK dresser, then glance down at my belly. Perhaps I see a little more bulge there than necessary, but not enough to warrant riding *this* size 52 all day. Besides, I don't have the obligatory three-day stubble and the scuffed metal-flake-blue open-face helmet—and I *hate* mirror sunglasses.

The maroon Yamaha Seca 400 next to the GS1100GK has an interesting look, though. Pert, gamin. Nice buns. But maybe it's just a little too pubescent. Today I'm looking for *flesh.*

The Yamaha 650 Seca, next in line, is more like it—lots of go, slender in the hips, ready to take me to the limit . . . and, er, maybe leave me behind. I'll think about that a moment. Besides, there's a certain stubborn take-me-as-I-am quality about the 650 that puts me off. Sure, it'll make my heart race . . . but just this once—for me—couldn't it maybe have worn lipstick?

No way, *monsieur*, it says.

And I'm not getting much closer to knowing who I am today. I go back to the Turbo a second time. It's neat, all right . . . yet it reminds me more and more of some Wile E. Coyote-model supersonic toaster. I can't imagine myself riding it. Next thing, I'd be wearing gold-lamé underwear and joining the Porsche Club.

That was when I first heard it in my mind—*"blapp-blapp-blapp. . . ."* Jeezcrise, an honest, hard-nuts motorsickle! I hurried around the room, searching engine bays, but all I found were exhaust systems that writhed around against each other like Saturday night at the Snake House. And still I heard it—*"blapp-blapp-bloot-blapp. . . ."* It was making me crazy.

Then, far over along the wall near the end, I saw a bright red motorcycle. It was lean and mean and one-cylinder wide—yet it had two pipes even still! But in this company, having only two pipes seemed the very soul of understated elegance. I looked closer. FT500, it said. Ascot. Of course, British, I thought. Hell no, it said back, American as a crew cut and time on your hands. I swung a leg over, stood it up. Shamelessly now, I worked the throttle. Over my shoulder, the guy with the shop rag wasn't smiling.

But I'd been in the Back Room too long now; I knew the rules. If I want it, it's mine. I pressed the button and there was an awful struggle beneath me before the thing caught—*"flooom-blablap-blapp-blapp."* Ah, yes. The guy with the shop rag nodded at last. I'd found my ride for today, and pretty clearly, he'd lost his.

I wheeled this deceptively big-looking Honda thumper out and let it come to a simmer while I put on helmet and leathers. Then, still not quite believing it, I *blapp-blapp*-ed right on out the door. Maybe tomorrow I'd try Mr. Coyote's toaster—yes, very likely—but today I was in Heaven (the Torrance Branch) and I had one big cylinder at my disposal and all the *blapps* a sinful man should ever dare ask. I'd git while the gittin' was good. . . .

—Ted West

Techspeak

Treating A Gasket Case

Weep no more, my lady.

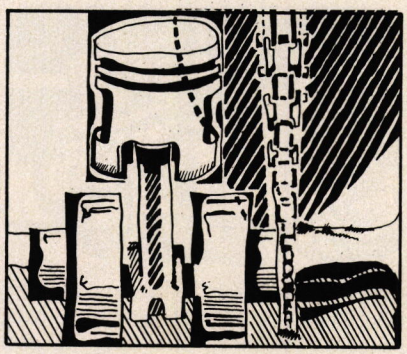
•It used to be that no matter where or when a motorcycle was parked, its engine was fully expected to leave a distinctive calling-card: a puddle of oil. Mismatched engine-case surfaces, ineffective gasket materials and mediocre sealing subtances all combined to make leaky motors standard equipment on virtually every make and model of motorcycle.

Time and technology—with the assistance of the sophisticated manufacturing techniques of the Japanese—have changed all that. It's a rarity any more to see a pool of oil beneath any motorcycle. But even though your new superbike is perfectly oil-tight right now, that could change. Chances are that sooner or later, either you or your designated wrench will be poking around inside of your motor, maybe to squeeze out more power, possibly to track down some gremlin. Either way, the care and attention given to re-sealing the gasket surfaces will determine whether the motor remains oil-tight or reverts to those leaky days of yesteryear.

In all probability, your first entry into the engine will be through one of its side-covers—to replace the clutch plates, for instance. And believe it or not, you're most likely to turn your hermetically sealed engine into an oil-weeper when you're *removing* the cover. The original gaskets usually bond themselves tightly to the adjoining surfaces, so the first inclination is to pry the cover off with a big screwdriver. Resist that temptation and you're ahead on points right from the start. Far better for this purpose is a soft-faced hammer or mallet, something that uses plastic, rubber or even leather as an impact medium. A few strategic taps with a non-metallic hammer usually will separate the cover from the engine case. And in the event that such a hammer isn't available, at least use a block of wood to cushion the blow of your favorite ballpeen.

Once the cover is removed, use a gasket scraper (again, *not* a screwdriver) to remove all gasket material from both surfaces. Be patient and do it right. The surfaces should be cleaned thoroughly with contact cleaner, or with acetone or lacquer thinner, both of which are flammable. So be *careful.* Use these cleaners only in a well-ventilated area, and keep them away from any flame or sparks.

Next, check all of the threaded screw holes to see if the area immediately around them has gotten raised above the



© 1982 MARTIN TRUESDELL

surface. This often happens when the screws have been overtightened, which tries to pull the threads up and out of the case. If any are raised, very carefully file them flat without allowing the file to contact the rest of the gasket surface. Better yet, use a deburring tool—or even an oversize drill bit—to chamfer the raised holes until they no longer protrude.

When reinstalling the cover, you'll need some sort of gasket sealer. It's best to use something that is recommended for gas/oil retention, since some materials—silicone sealer being one of them—are soluble in petroleum products, meaning that oil or gasoline will eventually work its way past them. The best sealers are the ones termed either non-hardening or semi-drying, and they make gasket removal and surface clean-up much easier the next time you have to pull that cover.

Give both sides of the gasket a light coat of sealer, then place it on the cover, using the screws to verify proper alignment. Start all of the screws into the case, making certain the gasket isn't being pinched or torn by the screws. Press the cover firmly and evenly around the case, then, working around the cover in order, tighten the screws a little at a time, making several rounds until all are snug. If the screws aren't of the Allen-head or hex-head variety, make the last round with an impact driver. A little sealer might ooze out around the joint, but it can be wiped off with a bit of solvent.

Installing a new head gasket involves much the same procedure, but with some additions. If a new gasket is needed because the old one is leaking, remove the head bolts/nuts with a torque wrench. And if the torque readings are much below those recommended by the factory, the leak might have been caused by too-loose bolts and nuts. Check with your dealer to see if there are any service bulletins regarding your model's head gasket. Occasionally, some models are assembled with head studs of the wrong length or that were improperly torqued.

Removal of the head may involve some prying with a screwdriver, but do so with extreme caution. Many engines have pry points built into the castings just for this purpose which are easy to spot. But if you can't find any, pick an area where both the head and cylinder appear to have adequate material to withstand the effects of prying. Gentle use of a soft-faced hammer is acceptable, but only if you're extra careful not to break off any fins.

Most original-equipment head gaskets are of asbestos composition, designed to provide optimum sealing under normal conditions. So if your engine is relatively stock, stay with a stock gasket. But if you've installed a big-bore kit, or if you subject your motor to racing-like conditions, use the proper aftermarket gasket. Aluminum-alloy head gaskets are designed for engines with up to 10.5:1 compression but are not recommended for anything above that, or for turbocharged motors, either. Those should use a solid copper gasket in conjunction with heavier cylinder studs, preferably the 4130 chromoly variety also available in the aftermarket. The copper gasket has to be annealed, however, before it is installed—and it can be re-used if it is annealed before each installation. Heat the gasket, either by using a rosebud heating tip on an acetylene torch or by putting it in a 500-degree oven for about 15 minutes. Then immediately quench it in a pan of water without allowing the gasket to cool first. This softens the copper so it can conform to the head and cylinder surfaces.

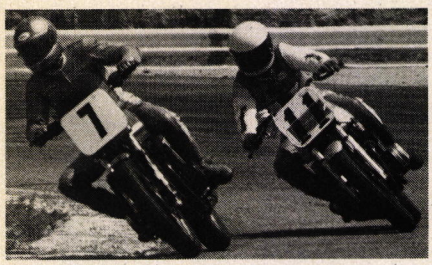
Finally, install the head gasket pretty much the same way as the clutch-cover gasket. Coat both sides with non-hardening gasket sealer (again, not silicone seal) and put the gasket in place. Slip on the head and tighten the nuts and/or bolts evenly, progressing in two-pound increments until the proper torque spec is reached. And good mechanics use anti-seize compound on the threads to prevent getting any false torque readings.

See, that wasn't so hard. If you keep everything clean and tighten all the screws evenly and firmly, you'll make a perfect gasket sandwich. The way they do it today, not back in the bad old days.

—George Huebner

Kawasaki takes a look at people who ride.

Kawasaki benchracers page



What Kawasaki people do in their spare time will tell you something about Kawasaki.

Two things that set Kawasaki apart from other bikes are a Hagie and a VandenBroek. But these aren't a couple of exotic parts. They're our own people, the kind that make Kawasaki more than just another motorcycle.

During the week, Frans VandenBroek works in our research and development department while Roger Hagie spends his five days making sure that anything we do is legal and meets all the latest government standards. You'd think that come Friday they'd put the last bike on the centerstand and head for the backyard.

But they don't. They ride motorcycles. And sometimes the riding gets pretty serious. Frans and Roger and their modified KZ750 make up a race team. A team good enough to win this year's AFM six-hour classic endurance race at Riverside International Raceway on their own famous "Discarded Parts Special." No factory support, no factory money. Just one of the best 750's around. And two very good riders who know their product inside out, love to ride, and ride well enough to win a race now and then.

Kawasaki. Special people that care, and some very special motorcycles. The 750 is one of them, and any Kawasaki dealer can show you why it was Frans and Roger's racing choice, and how well it, or any Kawasaki will work for you.

Kawasaki

Let the good times roll.

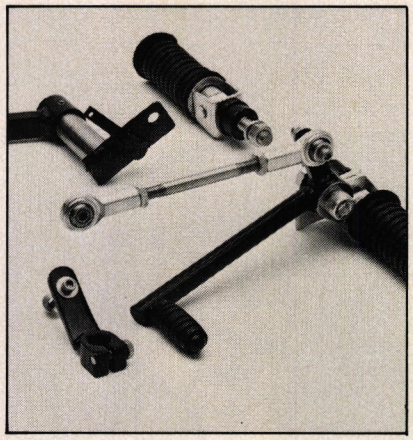
Kawasaki believes in riding safely. Check local laws before you ride. Member AMA and MSF.

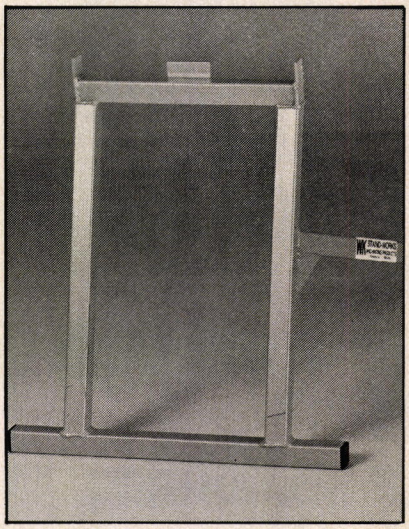
Motomart

Buy-products from the aftermarket.

Head Case: Quadrifoglio Inc. now has a new model Jeb's helmet for all you Europhiles out there. The CR/F1-2 differs from the CR/F1 by virtue of its six-position racheting faceshield, while both models share the fiberglass shell, brushed nylon interior and DOT approval. Another feature is the special shape, which is claimed to eliminate drag and lift. The new Jeb's helmet comes in standard hat sizes, has a suggested retail price of $174.95 and three paint schemes are available: white with red and black; red with black and white; black with red and white. For more information, write to Quadrifoglio Inc., Dept. CG, 5745 N. 11th Street, Phoenix, Arizona 85014.

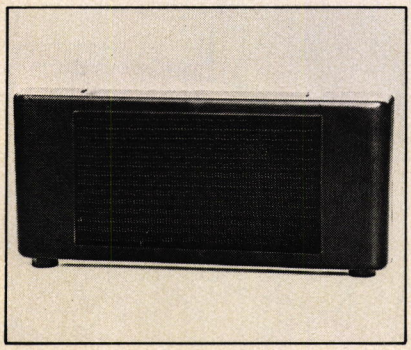
Advance To The Rear: If you want to lean that sucker over 'til the cases start dragging, then latch onto a pair of rearset pegs from Specialists II. These rearsets are claimed to increase ground clearance by replacing the stock pegs and foot controls, and utilize an aircraft-quality Heim-joint shift linkage. The Specialists II units are available for the Yamaha RD250, RD350, RD400, SR500, Seca 550, Maxim 650, Seca 750, XS650 twin, and all three Kawasaki GPz models. For more information, write to Specialists II, Dept. CG, 102 E. Prospect Ave., Burbank, California 91502.

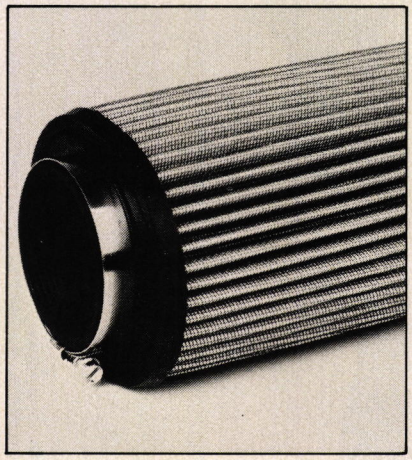




Stand and Deliver: When you come into the pits after a grueling moto, don't lean that motorcycle against a tree or—worse yet—someone's van. Instead, reach for a color-coordinated stand from WK Stand-Works. The stands fit Yamaha, Suzuki, Kawasaki, Honda and Maico motocrossers. For more information, contact WK Stand-Works and Racing Products, Dept. CG, 4860 Filly Lane, Riverside, California 92509.

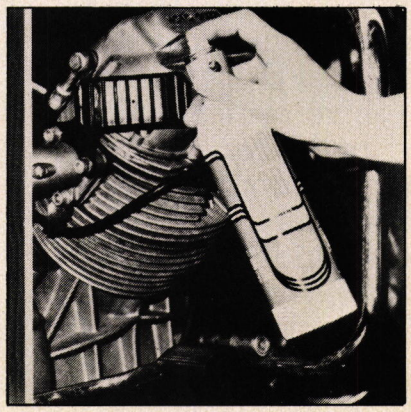
Cool It: Sustained high-speed or stop-and-go riding can produce dangerously high engine oil temperatures. To deal with the problem, Hayden Incorporated has introduced its Mark 3 oil cooler. The Mark 3 includes an integral thermostat, hand-brazed copper construction, brass threaded hose fittings and a significantly larger cooling area. Each cooler is tested to 300 p.s.i. Illustrated instructions are included, and the Mark 3 cooler is offered in either satin black or chrome finish. For more information, write Hayden Incorporated, Motorcycle Products Division, Dept. CG, 1531 Pomona Rd., P.O. Box 848, Corona, California 91720.

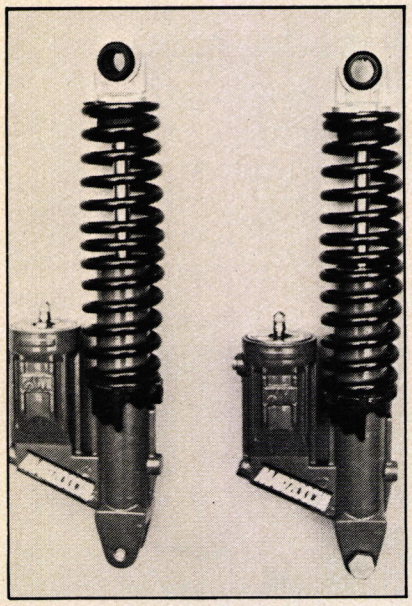




Faster Filters: K&N Engineering, manufacturer of air filters for practically everything, now has a replacement element for 1980-82 16-valve E-model Suzukis. The RU-1810 filter replaces the stock Suzuki airbox and clamps directly on the back of the plenum chamber. Like all K&N filters, this one employs a pleated gauze material that can be washed and re-oiled. For more information, write to K&N Engineering, Dept. CG, P.O. Box 1329, Riverside, California 92502.

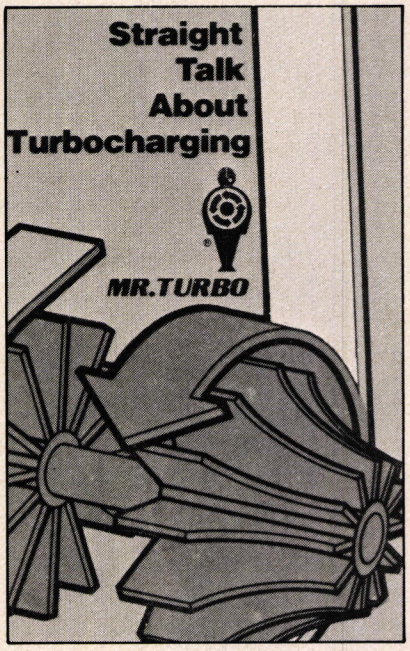
Let Us Spray: The Jennican offers an alternative to the ozone-eating propellants found in many spray cans. Just fill it 2/3 full with your favorite chemical brew, pressurize it through the solid aluminum valve head to 50 p.s.i. and spray with a clear conscience. The J-can comes in two sizes, is claimed to withstand pressures up to 260 p.s.i. and has a 90-p.s.i. relief valve. The 600ml can sells for $23.95 and the 800 ml goes for $27.95. For more information, write RAL Products Ltd., Dept. CG. 1146 Westport Crescent, Unit 6, Mississauga, Ontario, L5T 1G1.





Italian Street Shocks: Marzocchi gas shocks, formerly found only on European motorcycles, now are available for Japanese bikes and other European machines, as well. The Marzocchi Strada shocks are claimed to have a redesigned slim-profile body, a 12-millimeter shaft and a larger piston. Spring preload is five-way adjustable. The Stradas are tailored to individual models with regard to shock length, spring rate and damping. For more information, write Cosmopolitan Motors, Dept. CG, 301 Jacksonville Rd., Hatboro, Pennsylvania 19040.

Please, Mr. Turbo: You say you need more horsepower but aren't sure a turbo is the best way to get it? Let Mr. Turbo help you decide with this 20-page booklet, "Straight Talk About Turbocharging." The booklet addresses common questions about turbocharger installation and use on street, touring and racing bikes, with answers from Ted Hofmeister, president of Mr. Turbo. For a copy, send $2 to Mr. Turbo Incorporated, Dept. CG, 8002 S. Madison, Burr Ridge, Illinois 60521.

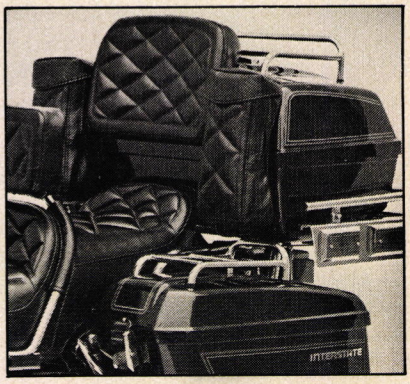


Super Honkers: If you're tired of having people laugh—or worse, ignore you—when you use your horn, consider replacing the weak, stock horn with *real* honkers from Flanders. Flanders now offers the well-known Fiamm 12-volt electric units in kit form. The kit is available in either black or chrome, and comes with two horns, a relay, brackets and instructions. Other Fiamm models also are available. For more information, write to Flanders Co., Dept. CG, P.O. Box 2297-D, Pasadena, California 91105.

Check Your Pulse: Wheelsmith, perennial purveyor of aftermarket gear for Maicos, has new pipes for the German marque. The Power Pulse expansion chambers are claimed to increase horsepower, and come in two types and two configurations: There's a Torque model for engines with stock porting, and a Rev model for ported engines. An up-pipe version is available for 1975½-1982 Maicos, and a low-pipe for 1968-1977 models. For more information, write to Wheelsmith Motorcycles, Dept. CG, 18020 Euclid, Fountain Valley, California 92708.

Motocross Tennies: What's that you say? You're getting blown off in the first corner, and then later in the pits, all because you don't have the ultimate in motocross footwear? JT Racing has the answer, with its Hi-Flyers. These shoes feature velcro closures in place of laces, with leather and nylon construction uppers for ventilation, and a padded collar and tongue for comfort. For more information, see your local motorcycle dealer, or write directly to JT Racing USA, Dept. CG, P.O. Box 10, Bonita, California 92002.

Interstate Bait: Upscale your Honda Interstate to near-Aspencade specs with the Markland Up-Grader package. The Markland pieces include Aspencade-replica travel trunk-mounted storage pouches, a larger backrest for your passenger, and a protective carpet liner for the Interstate travel trunk. Near-Aspencade style now can be yours for suggested prices of $55 each for the backrest and trunk liner, and $75 for the pair of storage pouches. For more information, contact Markland Industries Inc., Dept. CG, 3500 Carriage Drive, Santa Ana, California 92704, or call (800) 854-6747.



GUIDE LINES

Cycle Guide's Monthly Chronicle of Scoops, Tips, Rumors and Hard Facts

BY JOE KRESS

HONDA CB1100F

Honda's sporting flagship for America in '83, the CB1100F

Bucking the Euro-only status quo.

HONDA VF750F

VF750F has chain drive and a one-way, diaphragm-style clutch

Score: America 1, Europe 1.

COMING SOON

• This is the best time of the year—new-model introduction time. Just looking at press-release photos and poring through the spec sheets usually starts the palms sweating with an itch to get on the bikes and *ride*.

Consider just one of the new Hondas we'll be seeing, the Interceptor. Start with last year's four-stroke, 16-valve, 90-degree vee-four, wrap it in an all-new, box-section frame, add Pro-Link suspension with an extruded aluminum swingarm and, in pure-sport tradition, chain drive. The result is a maximum-performance, street-strafing 750 with claimed quarter-mile times in the elevens. But even at a glance it's obvious that the VF750F is destined to be much more than a straight-line rocket; the aero-dynamically designed fairing, windscreen and bottom cowling attest to that. And then there's the 16-inch front wheel, 39mm fork with air-assist and TRAC anti-dive, along with multi-adjustable suspension systems both front and rear. In looks and features, the VF750F just might be *the* ultimate production sportbike.

We haven't even mentioned the piece de résistance, however, the one-way clutch. This diaphragm-style coupler, patterned directly after the racing-only NR500GP and RS1000RW units, uses a one-way sprag that allows the clutch to slip slightly when backloaded during a

YAMAHA XJ900

Quarter-fairing and fork brace distinguish Yamaha's XJ900

As do the remote-resevoir shocks and three-spoke wheels.

YAMAHA Midnight Special

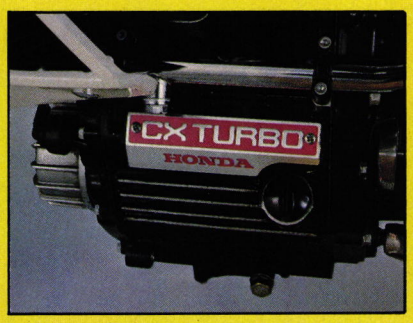
980cc vee-twin powers Yamaha's XV1000SE

The return of the Midnight Special.

Exclusive:

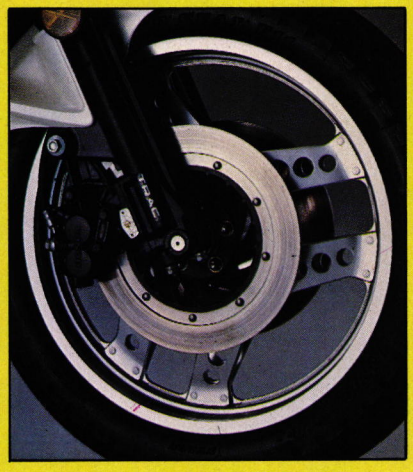
1983 CX650T Honda

PHOTOGRAPHY © 1982 VIC HUBER



Turbo engine gets an added nameplate

The real changes are inside.



TRAC anti-dive graces CX's front fork

For composure under braking.

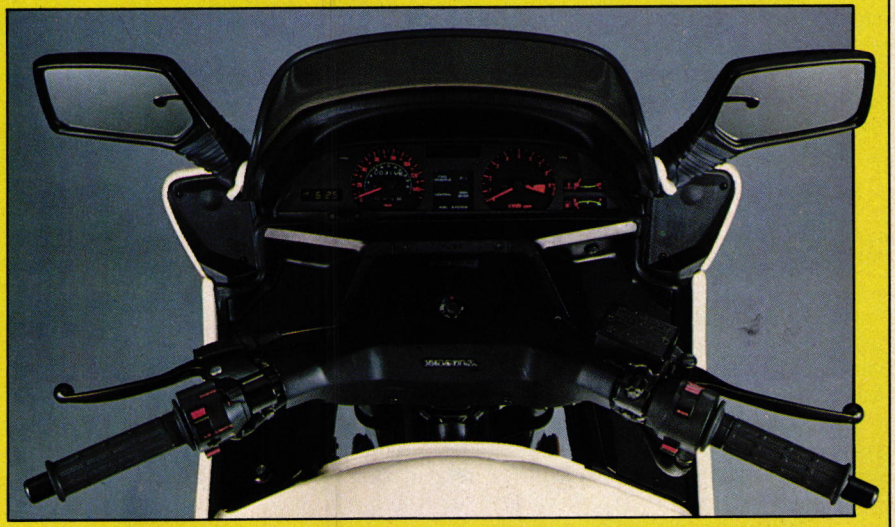
• The technochild of 1982 is now one year old, and the bike that spurred an industry-wide mania for turbocharging has changed throughout the course of that year. Although at first glance the '83-version Honda Turbo might seem to be nothing more than a paint-and-tape job, behind the new, injection-molded ABS fairing, wholesale changes have been made to the CX500T.

To start, this '83-model Honda Turbo now displaces 673cc. To accomplish the increase in engine size, both the bore and stroke of the '83 bike were boosted from the '82 CXT's and now measure 82.5mm x 63mm. Also, the compression ratio is up from the '82 model's and at 7.8:1 is slightly more than half a point higher. The result of these modifications is a claimed output of 97 horsepower.

Besides displacement and compression increases, this year's Honda Turbo is both lighter and simpler than the '82 model. The ABS fairing accounts for the lion's share of saved weight, but detail changes throughout the machine bring the weight of this year's Turbo down to 537 pounds, roughly 20 pounds less than the '82 model. One example of this attention to detail is the intake plumbing, which was redesigned to eliminate the forward-mounted resonance chamber. And with that piece of hardware gone, not only was weight lost, but space became available for a small storage compartment in the left side of the fairing. Also, the tail-mounted computer has been reprogramed for both added performance and simplicity. The fuel injection now is controlled by a single digital computer, and the cold-start circuit now is manually operated with a handlebar-mounted lever.

With greater displacement, higher performance and lower overall weight, the '83 Honda CX650T promises to improve on an already tough act to follow. You'll find out if the bike delivers all its promised performance when we feature a complete road test of it in an upcoming issue. You'll see it in CYCLE GUIDE first.

–Joe Kress



Fairing gains a left-side pocket, thanks to elimination of the resonance chamber

Reducing weight and complexity, while gaining storage space.

Continued

THE ACCEL EAGLE HAS LANDED

ACCEL'S NEW MUSCLEBIKE SPARK PLUGS – ENGINEERED FOR BIG BIKE PERFORMANCE

Accel's new Musclebike Plug is the first plug developed specifically for high performance applications. From its bright yellow insulator to its unique U-Groove ground electrode, the Accel Musclebike Spark Plug is state-of-the-art for today's superbikes. There's an Accel plug for most larger bikes including thundering V-Twins, torquey triples, high-revving fours, or snarling sixes. So if you appreciate high performance, if you love that rush of adrenalin, if feeling your arms stretch and the front wheel get light turns you on, then grab a handful of Accel Musclebike Plugs. Because at Accel, we don't just talk high performance, we make it happen!

ACCEL U GROOVE SPARK PLUGS

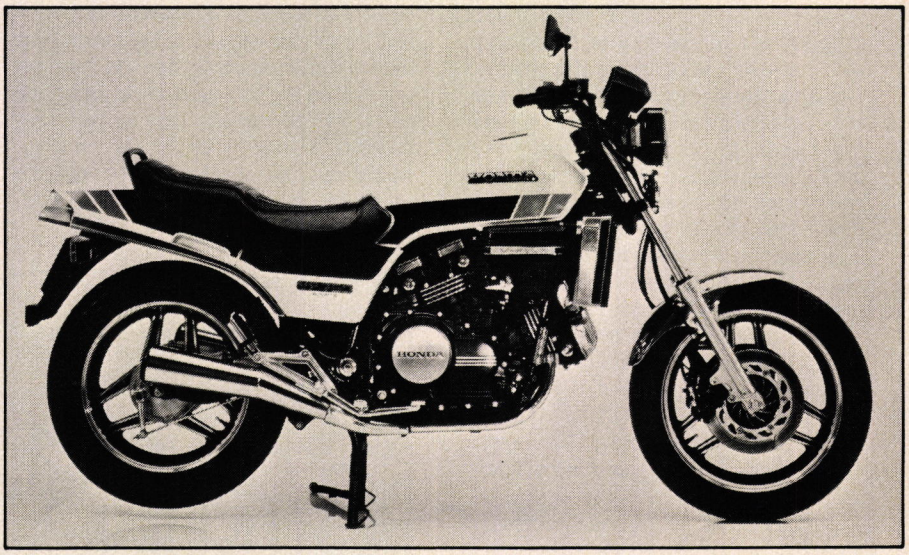
To order any ACCEL Spark Plug, send $2.20 plus 50¢ shipping and handling, to: ACCEL, Customer Service Dept., 857 E. 230th St., Carson, CA. 90745 (California residents add 6% sales tax). Be sure to specify the make, model, and year of motorcycle.

downshift. This not only eliminates wheel-hop caused by the considerable engine braking of a four-stroke, but it allows the transmission and other driveline components to be lighter and more compact, by limiting the effects of sudden loads from the rear wheel. The clutch also is just one of the many features that makes the VF750F so desirable.

• But if 750cc isn't enough to satisfy you, Honda has another new sport model: the CB1100F. The big-bore Super Sport also is coming to America. For 1983, Honda's CB900F has received a substantial boost in displacement, for its engine now is based on the CB1100R's. And the 1062cc engine isn't the only change for '83; the 1100F has new front-end geometry for improved handling and sharper steering response, along with an air-assisted fork that incorporates four way damping adjustment. Other bits include a steel box-section swingarm, a spoiler-type front fender to direct air to the oil cooler, and lightweight footpeg mounts for racebike looks and ergonomics. CYCLE GUIDE will have a full road test of this bike in an upcoming issue.

• After speculation about the 1983 CB1100R being powered by a liquid-cooled vee-four, the bike shows up, once again, with an inline, air-cooled four. The race-bred 1062cc engine has a 10.0:1 compression ratio and breathes through four 33mm carburetors. The motor is cradled in a double-downtube frame, using twin remote-reservoir shocks at the rear and an air-assisted, anti-dive fork up front. This single-seat, Euro-only machine also has new, gold-anodized ComStar wheels with two ventilated dual-piston disc brakes for the front and a single dual-piston disc on the rear.

• Compared to the new Interceptor VF750F and the CB1100F, the VF750S Sabre might seem anticlimatic. But for 1983, the liquid-cooled vee-four has a number of improvements, not the least of which is more horsepower due to a change in valve timing and lift, and the addition of larger-bore carburetors. The '83 version of the S-model VF750 also has revised front-end geometry, a new fork brace, a 10mm increase in suspension travel both front and rear, and recalibrated spring and damping rates. Unlike the F-model, however, the VF750S uses shaft drive, but its clutch, like the VF750F's,



The VF750S inherits the F model's one-way clutch along with some added power for '83

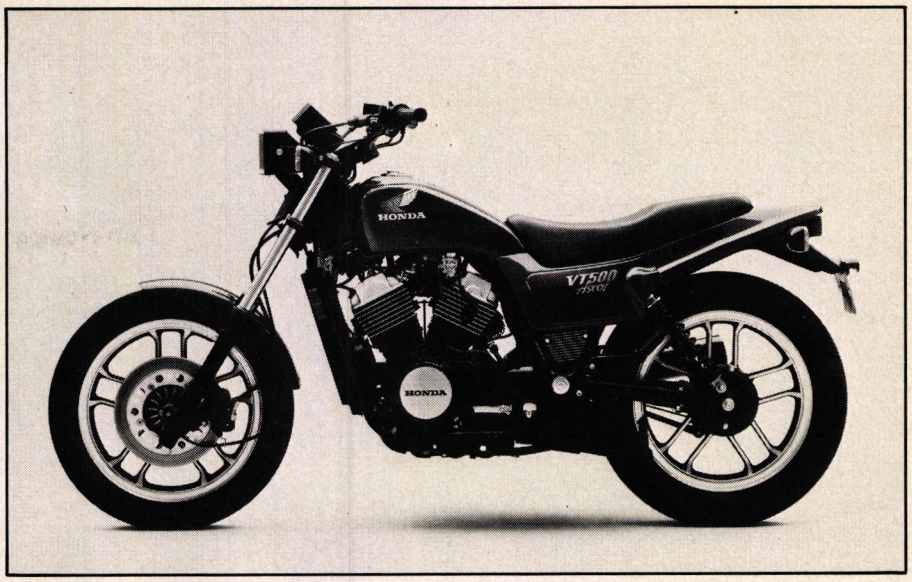
It might be overshadowed this year, but it's still a sharper Sabre.

is Honda's new one-way sprag unit.

• Honda's VT500FT Ascot is a sport-oriented, 491cc, liquid-cooled vee-*twin*. The new bike shows more than a little design thought at work; besides having three valves per cylinder (two 26mm intakes and one 33mm exhaust), two-sparkplug-per-cylinder heads, and compact, dual-throat carburetors, the cylinders are juxtaposed at an unusual angle: 52 degrees.

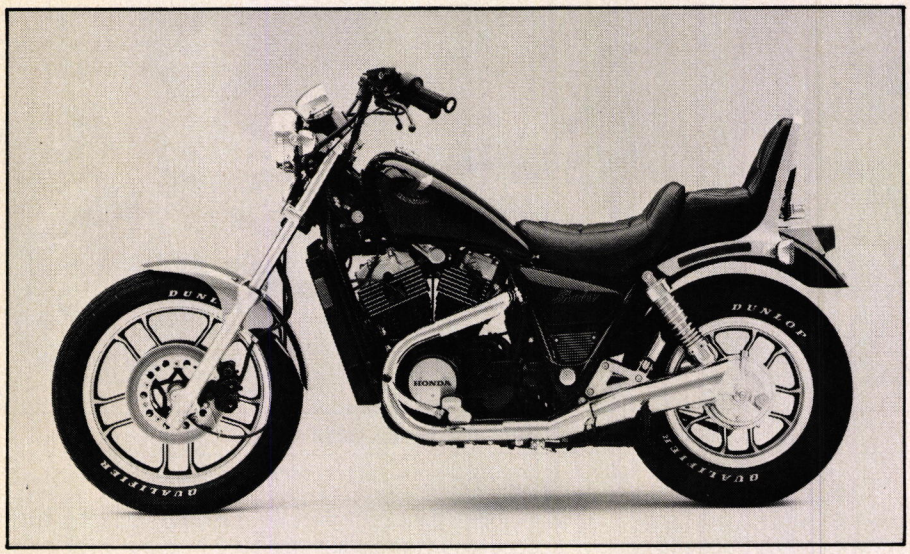
According to conventional theory, the ideal spread for a vee-type engine is 90 degrees, since that angle all but eliminates primary vibration. But a 90-degree vee makes for an unusually long engine that forces numerous compromises in chassis geometry and styling. And using a narrower vee-spread has meant that the engine would emit more vibration than it would at 90 degrees, vibration that either had to be tolerated or minimized through the use of a counterbalancer.

The VT500 Ascot, however, has gotten around both problems in a unique fashion. The vee-spread is just 52 degrees, but the two crankpins on the crankshaft are *offset* 76 degrees. By staggering the crankpins (Honda claims to have developed a formula that will work on *any* vee engine of less than 90 degrees), the non-counterbalanced engine can operate without primary vibration, just like a 90-degree motor. And this machine, too, will soon be available at your dealer's.



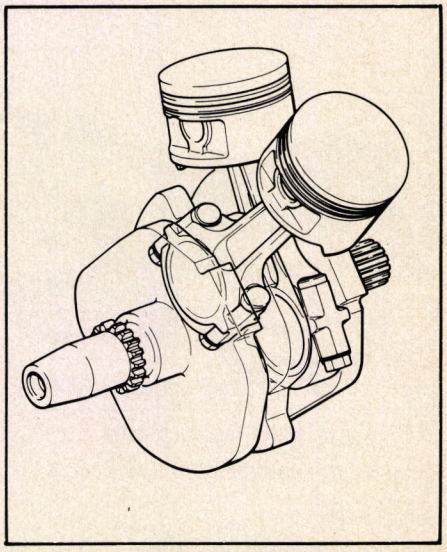
Second generation Ascot shows up with more than just a few changes

The engine is the big news; vee-twin power to go with the flat track look.



The Shadow 750 is the second half of Honda's custom surprise for 1983

This American street-stalker comes armed with a 45-degree twin.



Offset crankpins reduce primary vibrations

Better living through applied physics.

• Parked right beside it, however, will be a few more vee twins from Honda: the VT500C Shadow, a custom-styled bike with the same 52-degree engine, and the VT750C Shadow, another custom-styled vee twin, but this time with the cylinders set at a 45-degree angle. The Shadow 750 also has a two-piece stepped seat and sissybar, a 15-inch rear wheel and a claimed 67 horsepower.

• But the Shadow 750 won't be the horsepower king in the Honda custom lineup; that honor goes to the new V65 Magna. This year, in addition to the 750cc Magna the vee-four cruiser is offered in a 65 cubic inch version, and according to Honda, the bike puts out 113

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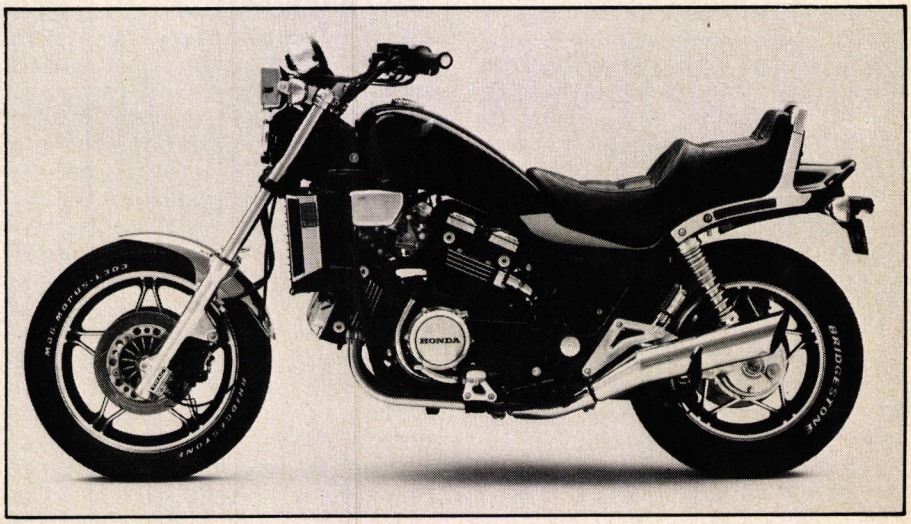
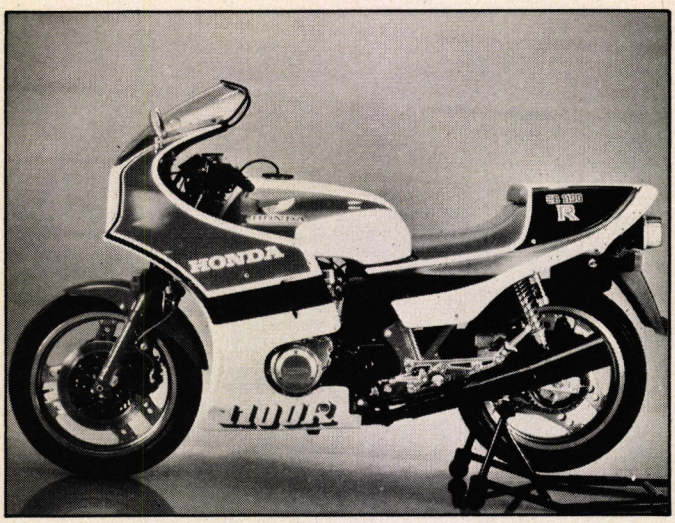


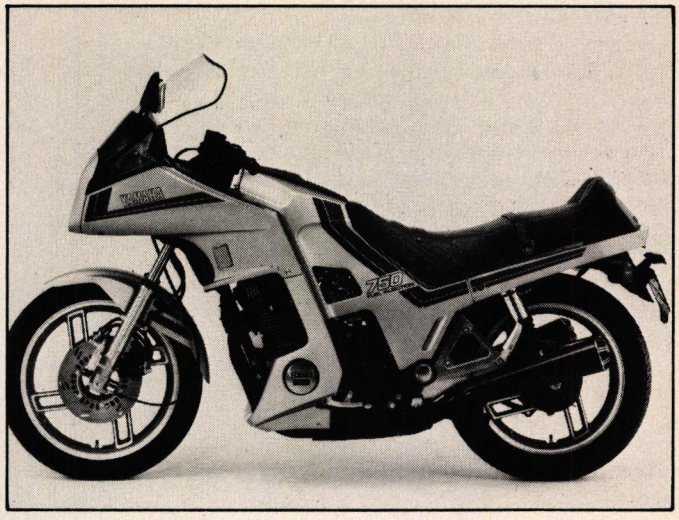
The V65 Magna is one custom that has plenty of Go to complement its Show

65 cubic inch vee-four pumps out a nasty 113 horsepower.



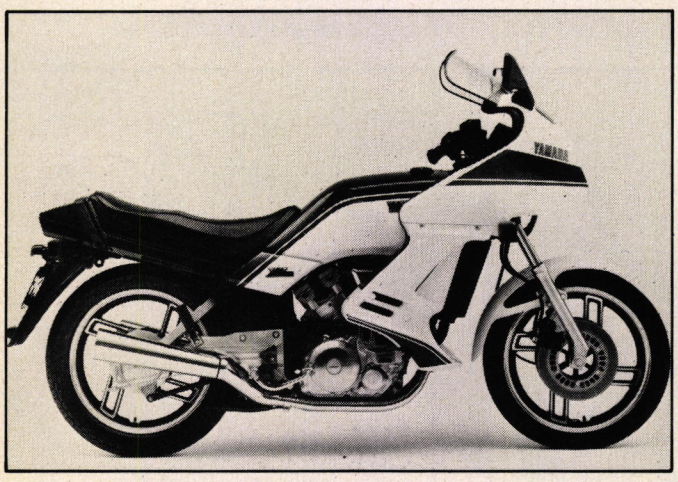
No vee-four engine for the CB1100R

And no U.S. availability, either.



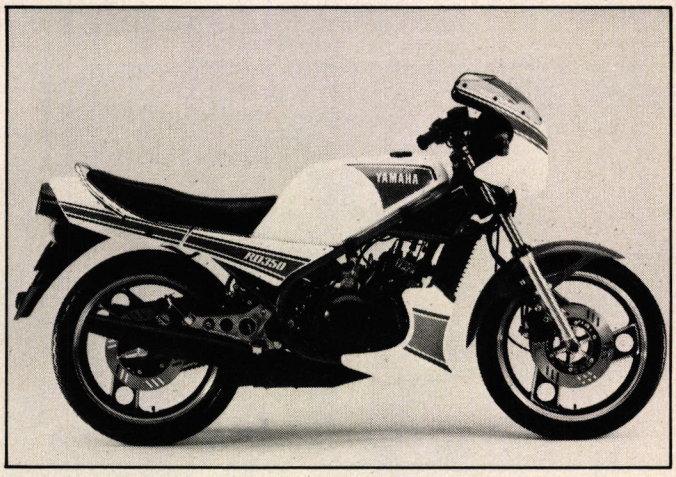
Yamaha's '83 XJ750D has fuel injection

Plus Turbo-look-alike styling.



XZ550 gets Turbo-replica plastic, too

Visual-only changes for the Vision.



All-new RD350LC has Power-Valve system

Proof that racing improves the breed.

horsepower.

• So far, the news has been all Honda. But Number Two also has some interesting equipment up its 1983 sleeve. Apparently, Yamaha believes there already are sufficient models in its lineup, and so chose a path of selected refinement instead of wholesale change. A perfect example is the Midnight Special, 1983-style. The most obvious change from Midnight Specials of the past is the vee-twin engine. The XV1000SE is powerd by Yamaha's 75-degree vee-twin that now displaces 980cc, due to an increase in bore diameter. The new bike also uses shaft drive, like last year's 920 Virago. Although the machine pictured is a European version, the black-and-gold bodywork and engine should show up on the U.S. model.

• For 1983, Yamaha's XJ-series expands both in size and number with the newest addition, the XJ900. This super-sport/sport-touring bike is powered by the same basic DOHC, inline air-cooled four used in the 750 Seca; but with a bore and stroke of 67.0 by 60.5mm, the engine now displaces 853cc. In XJ tradition, the 900 is shaft-driven, but there's a lot more going on here than just a jump in displacement. The front fork affixed to the double-cradle frame is air-assisted, utilizing both a die-cast aluminum brace to prevent flex, and anti-dive to control nosedive during braking. Rear suspension is with twin shocks, but the XJ's gas/oil units feature remote reservoirs and a combined preload/damping adjustment on the bottom of each shock. Besides the bodywork and fairing, other changes include new, wider, three-spoke wheels with three ventilated disc brakes. In the cockpit, hand controls mount on adjustable, compound clip-on-type handlebars, and the instrument panel now includes three dials; in addition to the tach and speedometer there also is a combined fuel gauge and quartz clock.

• Although the XJ900 uses carburetors, another new model, the XJ750D, doesn't—it's fuel-injected. It also looks exactly like last year's Turbo Seca, using the same angular tank and fairing combination. The injected 750 is, of course, shaft-driven, with air-assisted suspension front and rear. Visually, the biggest change on the XJ750D from last year's turbobike is the graphics, designed to break up what was formerly a somewhat slab-sided look.

• The XZ550 Vision has an all-new look for '83, for it also is fitted with a fairing similiar to the one on last year's XJ650 Turbo. Beneath its aerodynamics, however, the XZ550S is little-changed from the 1982 machine. It's powered by the same 70-degree, counterbalanced, liquid-cooled vee-twin. The chassis, with its triangulated subframe, Monoshock rear suspension and trailing-axle fork, also is a carry-over from the '82 machine.

• And now for a particularly tasty piece of forbidden fruit, Yamaha-style: the 1983 RD350LC. About the only thing that remains from the '82 bike is the crankcase; the engine's top end, the chassis and the styling on the '83 bike are all-new. The RD still is a twin-cylinder, 350cc two-stroke, but it now has an electronic Power Valve system straight off of the factory roadracers. The computer-controlled power valves advance or retard exhaust-port timing according to engine rpm, to enhance either high-rpm power or low-rpm torque. Some of the other engine changes on the '83 RD include an electronically governed CDI ignition system that adjusts the timing to suit any engine situation, and a race-bred TZ-style clutch.

The RD's new chassis is a direct copy of the Yamaha works GP bikes, with its widely spaced, rigidly triangulated frame tubes. Rear suspension is a rising-rate Monocross system, with a

gas/oil shock mounted low and ahead of the swingarm for a low cg and better mass-centralization. At the front, the new RD is suspended by a short, stiff, large-tube, air-assisted fork. And the brakes, both front and rear, are Yamaha's opposed-piston calipers working on ventilated discs. A new tank, small fairing and lower cowling complete the look on a bike that's sure to have many Americans crossing the border into Canada—and returning with the van slightly heavier than when they left.

HARD CASH

• According to figures compiled by the Motorcycle Industry Council, sales through April of this year for streetbikes in the 450cc-through-749cc range were down 77.2 percent from 1981. In fact, the MIC claims that the only models to do well during this 1982 period were streetbikes in the 125cc-and-under class. Sales for those machines were up 65.7 percent.

• The per-hour shop rate for motorcycle repairs dropped during 1982. In 1981 the national average was $24 an hour, but in '82 that number dipped to $20 an hour.

• Husqvarna won't be producing its expected three-wheeler during 1983. Instead, the company has decided to focus research and development on its existing model-line, bolstering its position in both enduro and motocross racing. Husqvarna feels that the decision to postpone a three-wheeler is important to the long-range success of the company.

• In a demonstration of his support for American industry, particularly the American motorcycle industry, Kentucky's governor John Y. Brown Jr. is selling his Japanese-made motorcycles. To kick off a "Buy American" rally held at the Kentucky state Capitol, Brown offered for sale his 1980 Yamaha and his 1982 Kawasaki. The Kawasaki was a Christmas present from his wife, TV personality Phyllis George.

• The U.S. motorcycle industry has grown nearly fourfold since the mid-Sixties, with an estimated 7.3 million motorcycles now in use. To help put this growth into an understandable order, the Motorcycle Industry Council has published the sixth edition of its Statistical Annual. The report documents the history of the market by year, state, model type and engine displacement of machines sold. Also included are tables for new and total registrations, number of machines imported and total number of bikes sold, both wholesale and retail. The 1982 Motorcycle Statistical Annual is available for $25 through the Motorcycle Industry Council at 2400 Michelson Drive, Suite 110, Irvine, California 92715.

FEDERAL CASES

• State troopers in seven Florida counties recently completed an experiment with their radar systems—the troopers stopped using them. During the first month of the trial period, traffic fatalities *decreased* by 27 percent and overall traffic injuries were down by seven per-

Continued

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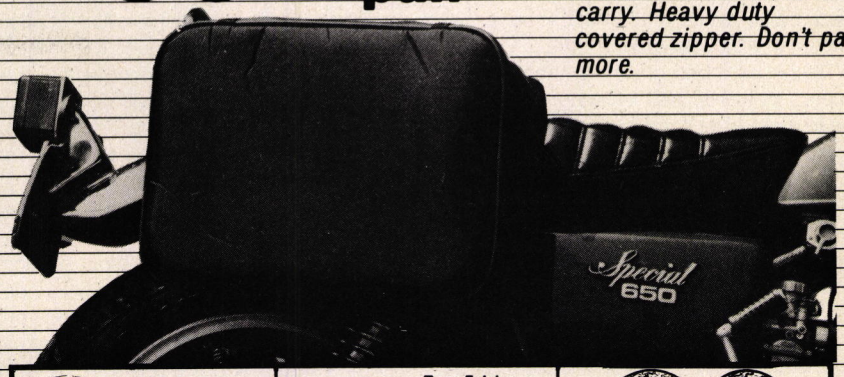

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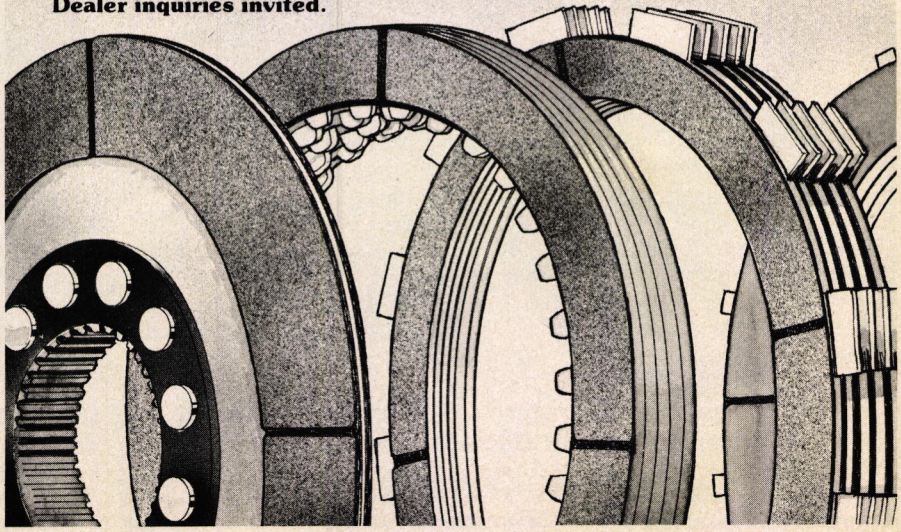

cent. The reason given for this turnaround was that without radar, the troopers were spending more time patroling the roads.

• Wisconsin police, however, seem content to sit in place and pick off speeders. DOT records show that state's speeding citations have almost doubled since the 55-mph speed limit became law. More than 270,000 tickets were written in Wisconsin during 1981.

• Based on those numbers, then, it almost seems that proposed legislation in Delaware, SB588, would be put to better use in Wisconsin. If the Delaware bill becomes law, a motorist in that state with six points already on his license would be given the option of either taking the points for any additional tickets, or working the points off by picking up trash along the state's roadsides.

• The California state assembly also is at work on a piece of legislation aimed to make things a little easier for the motorist. The California bill, if passed, would allow vehicle owners in that state to renew registrations on *all* their machines—cars *and* bikes—at one time and on one date, eliminating the need to send in registration forms three, four or even five separate times each year.

RUMORS

• Our usually reliable man in the Midwest has come up with more information on The Harley That Wasn't. He claims to have actually seen prototypes, and if we're to believe what he says, it's a real shame the current slump in the motorcycle market caused the project to be put on the back burner. After he calmed down enough to be coherent, he rattled off the statistics: a liquid-cooled, overhead-cam, 60-degree vee-four with Bosch L-Jetronic fuel injection and an internal counterbalancer. Then he started yammering about a monocoque frame and a choice of either belt or shaft drive, but by this time he had slipped back into an uncontrollable motolust frenzy. So can you believe a man in that condition?

• Here's a little something that just popped up during one of our phone calls to Japan. Our man over there was talking about 1000cc vee-fours still being possibilities from Honda and Yamaha when he mentioned a Honda project, code number CVX1000S. Asked if that was the experimental 1000cc vee-four, he said no, CVX1000S was the vee-*six*. And this was just in casual conversation.

• Finally, a note from the other side of the world—Meriden, England, to be exact. There's some tight-lipped speculation going on about Triumph beginning tests on its first all-new bike in 13 years—a liquid-cooled, DOHC parallel twin. Of course, no one will admit anything, but our English insiders say the new engine is a joint effort of Triumph and an outside engineering firm. They go on to say the eight-valve motor might be offered in three displacements: 750cc, 850cc and either 900 or 950cc. And besides the gear-driven balancer, they're also talking about fuel injection for the as-yet-unnamed Triumph. Whether or not you want to believe all this is completely up to you—right now it's just talk. Just like this year's 750cc eight-valve Triumph was.

APART FROM THE CROWD

• Now for something completely different. Automotive Products/Lockheed of England has just come up with an innovative, rim-disc brake system. It uses an inverted, single-piston caliper working on a stainless steel disc that is mounted to the outside of the rim, where the caliper can exert the maximum mechanical advantage. And according to AP, the disc will not distort when it's hot. Additionally, because only one disc and caliper are needed per wheel, AP claims the system actually is lighter than a conventional twin-disc brake. Right now the AP rim-disc brake is available only to racers, but a street version is planned.

• Factory cruiser bikes are marketed as personalized machines, and Harley-Davidson just might have out-customed the competition for '83. With its factory-operated Conversion/Rework program, H-D is able to insure that a buyer can leave the dealer's showroom with his machine painted *exactly* the way he wants it. The Conversion/Rework setup lets dealers

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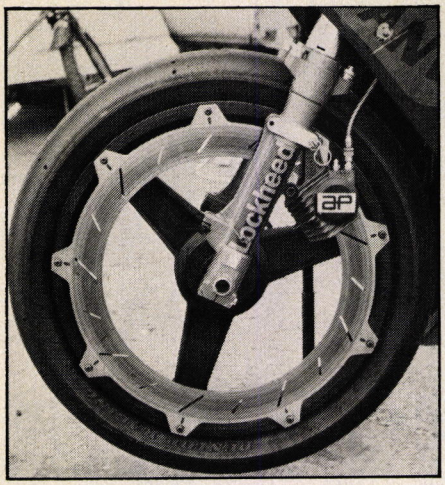
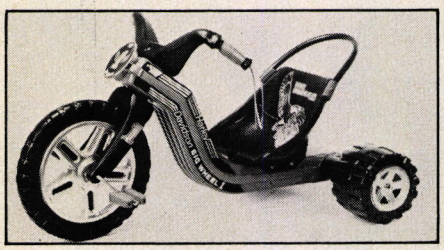


New-wave disc brake from AP/Lockheed

Give an Englishman a piece of metal. . . .

order tank and fender sets for any model in the Harley line, custom-painted in any one of more than 50 Kandy or Pearl colors, sprayed over a pre-selected base color. And if that doesn't offer enough possibilities, the parts also can be covered with virtually any DuPont automotive color. To top it all off, over half a dozen decal options are available. Take *that*, LTD, Nighthawk, et al.

• And it seems that Harley not only wants to keep its full-size buyers happy, but also wants to cultivate new ones at an early age—and we mean *early*. You'll remember a few months back we told of Harley's plans to license its name for use on products ranging from candy to cologne, figuring that the H-D trademark was one of the company's most recognizable assets. Well, Empire of Carolina, a toy manufacturer, has taken Harley up on the deal and introduced its H-D Big Wheel. So get ready for gangs of three-year-olds cruising the neighborhood, six-packs of Kool-Aid strapped on the back. Get your motor running. . . .



H-D Big Wheel: street-side cruiser

Head out on the sidewalk. . . .

• Finally, here's another piece of new, British hardware: the Alpha helmet, from Centurion. The Alpha has so many novel features that existing British laws can't even cover it; as a result, it's illegal for sale in that country. For starters, the Alpha doesn't have a chinstrap; instead, the front part of the helmet hinges open and then clamps shut for what Centurion calls collar retention. And then there is the visor, a glass/polycarbonate laminate that's fixed in place, but features a wiper system and built-in ventilation. Although the Alpha doesn't meet British standards, it does qualify for sale on the Continent. It's expected to retail for roughly $275. •

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The outrageous CB1100F.

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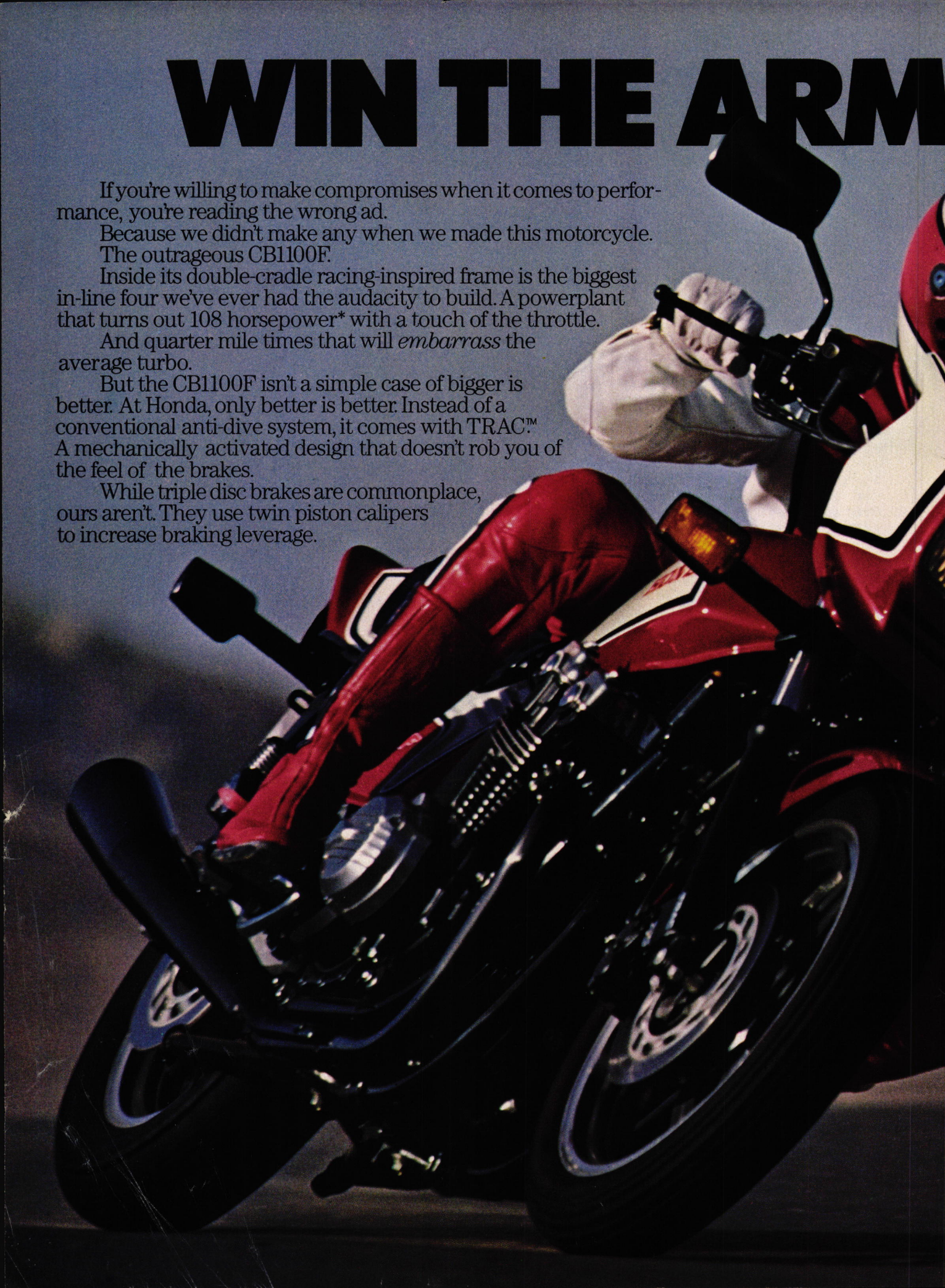

AMENTS RACE.

And since flex can affect handling, we were very inflexible when it came to the chassis. The swing arm pivots on needle bearings for precise alignment, and the 39 mm forks are not only damping adjustable, they have a special brace built right in.

Of course, the best feature isn't a feature at all. It's experience.

The motorcycle streaking across this page is a descendant of the machines that won the grueling Coup d'Endurance four years in a row. And made history at Daytona by sweeping first, second and third in the world's most prestigious superbike race.

The CB1100F

By now you've probably decided that you have to have the CB1100F no matter how much it costs. If so, we've got a surprise for you.

How little it costs.

At a suggested retail price of $3698† it'll be going for hundreds less than anything in its class. Which is going to make passing up a CB1100F even harder than passing one.

HONDA

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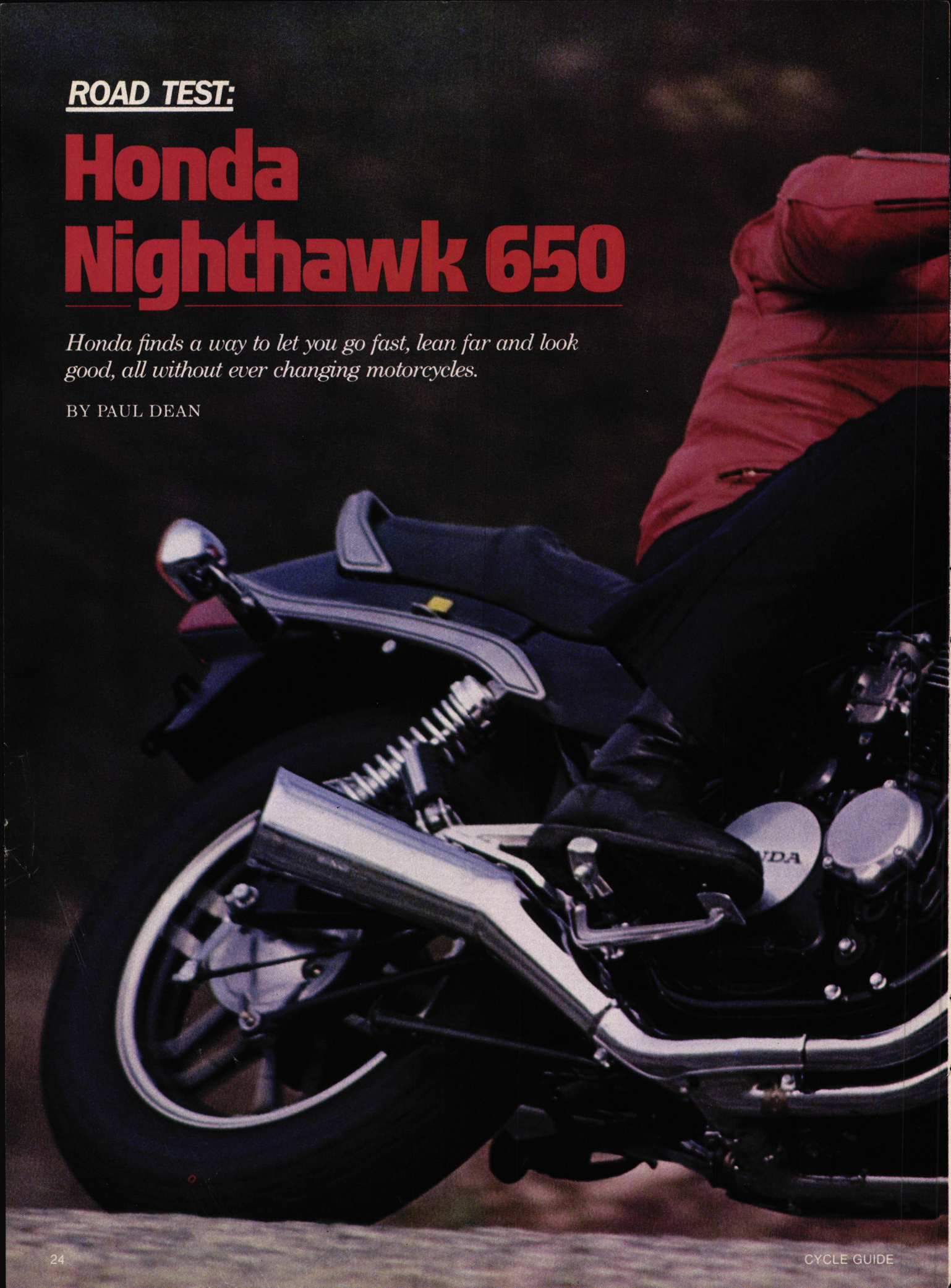
ALWAYS WEAR A HELMET AND EYE PROTECTION. Specifications and availability subject to change without notice. ©American Honda Motor Co., Inc. For a free brochure, see your Honda dealer. Or write: American Honda, Box 327, Dept. 8000, Van Nuys, CA 91409. †SAE net taken at the crankshaft. ††Based on comparison of manufacturer's suggested retail list prices as of April, 1982. Actual prices will vary.

ROAD TEST:

Honda Nighthawk 650

Honda finds a way to let you go fast, lean far and look good, all without ever changing motorcycles.

BY PAUL DEAN



It's a fact of life these days in moto-America: Handling may sell headlines but style sells motorcycles. There are hordes of enthusiasts out there who occupy most of their time reading, talking and fantasizing about the latest hot-rod sportbikes; but when it comes time to ride a new steed out of the showroom, most buyers are opting for the factory-custom models, which often outsell their sportier counterparts by as much as ten to one.

A sticky situation, to say the least. With all of the publicity and corporate image-building that's connected with sport motorcycles, the major manufacturers want to be highly visible in that market; but they also must turn a profit, and the truth is that accomplishing both goals is growing more difficult with each passing year. Honda, however, believes it has struck upon a workable solution by, in effect, inventing a *new* category of motorcycle: the sport-custom. Honda calls this genre of dual-purpose hybrid the Nighthawks, the 650-class version of which you see here. And it, like all Hondas so named, is intended to fill the needs of *both* affected user-groups, to give the backroad-blitzer the sort of turn-and-bank excitement he demands while also offering the urban

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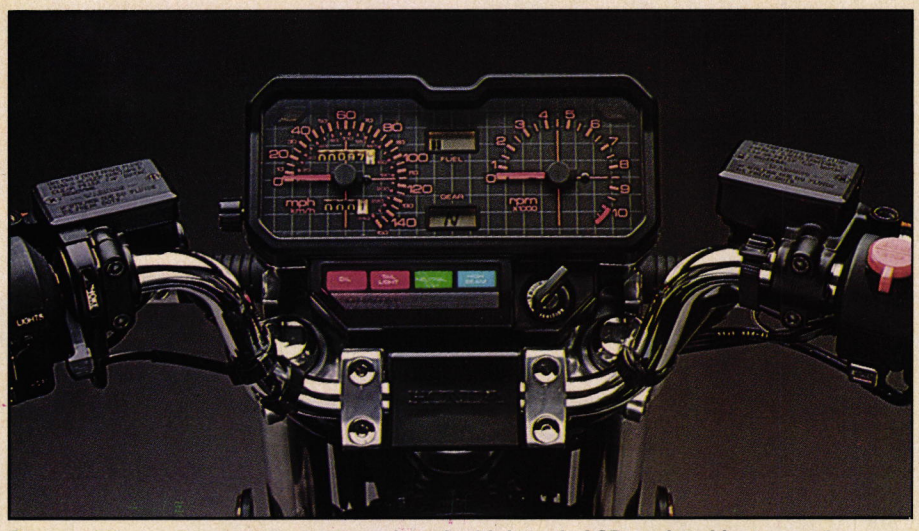
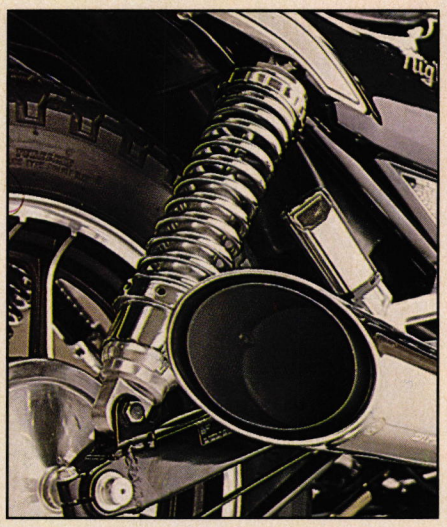


Custom-bike purists might not appreciate the high-tech, LCD-assisted instruments.

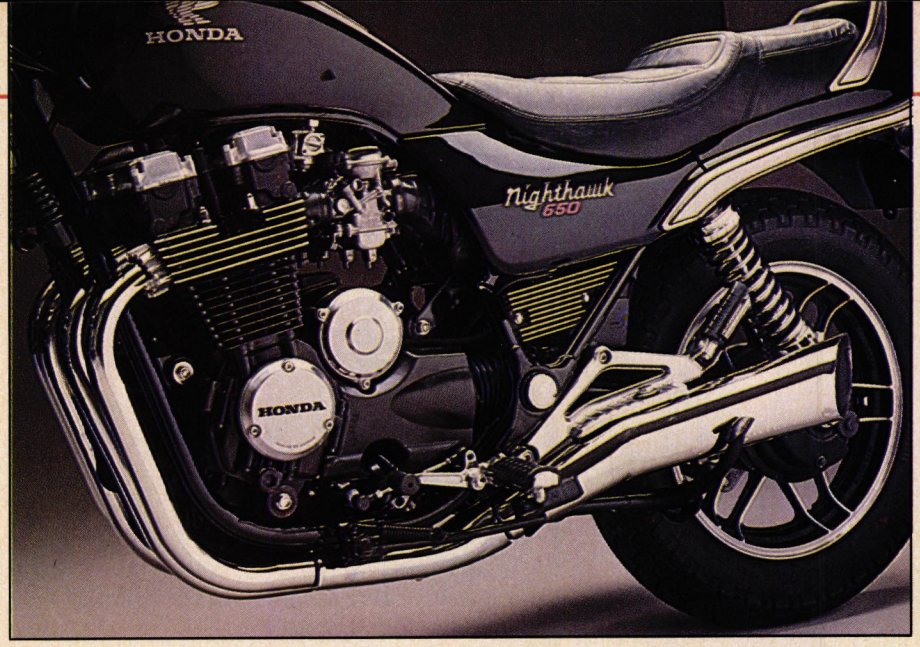
But everyone should welcome the demise of the 85-mph speedometer.



Baloney-slice muffler has bad-dude look

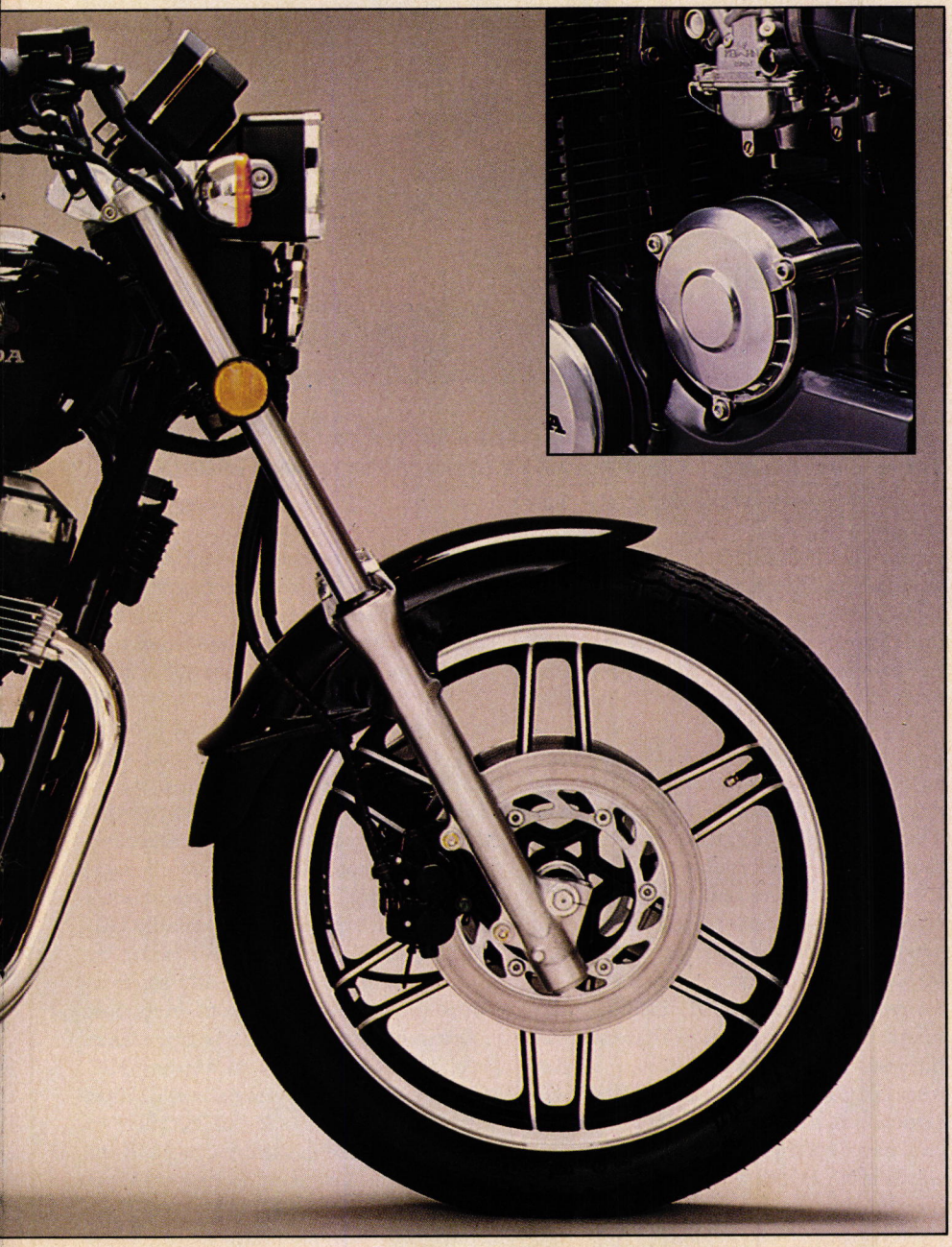
And good-guy noise-abatement.

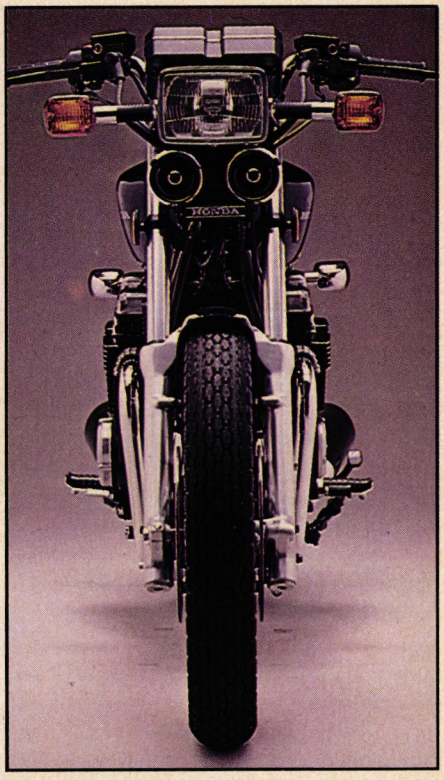
Once and for all, the Nighthawk 650 dispels the notion that sportbike performance and custom-cruiser styling have to be mutually exclusive.



All-new, 16-valve engine offers what nothing else in the class can match

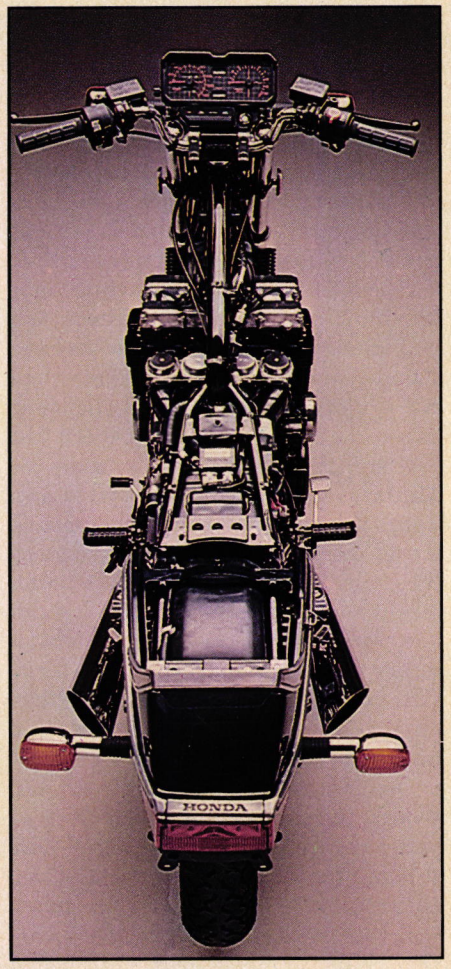
Like 16-valves, 12.28-second ETs and the next best thing to zero maintenance.





Front view reveals engine's slimness

Chain-driven generator is the key.



Nighthawk undressed for inspection

Anatomy of a dual-purpose winner.

Continued

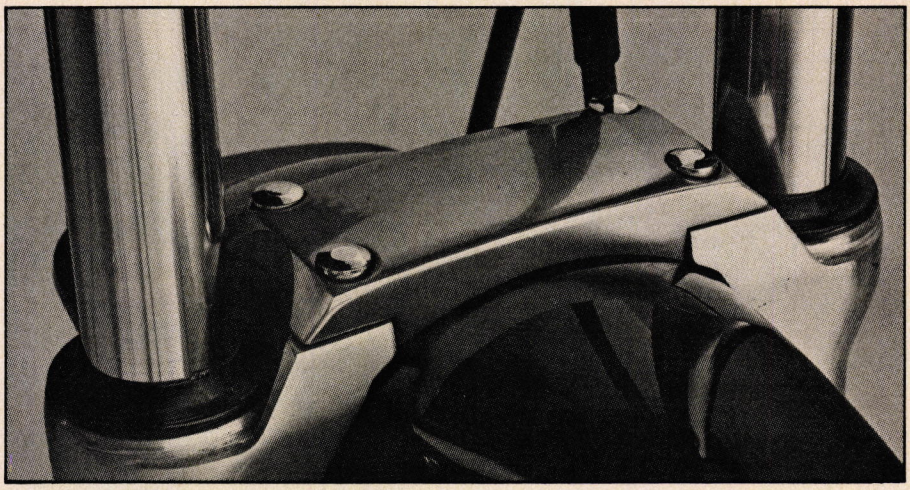
guerrilla the streetwise styling he prefers.

This is not quite a brand-new idea, since there were three Nighthawks in Honda's 1982 lineup. But the CB650SC is the company's first *real* Nighthawk, an entirely new machine designed from the outset to play the sport-custom role. Last year's offerings, you see, were little more than redressed versions of existing models. And should you wonder why, when the industry is turning to vee-type motors and liquid-cooling, Honda chose to tool up for an all-new "conventional" four, there was good reason: Its dealer network literally *begged* for an air-cooled inline 650 with shaft drive, something that could go head-to-head with Yamaha's 650 Maxim, a bike that was killing Honda on the sales floor.

Whether or not the Nighthawk 650 wins that sales battle remains to be seen. But it should win the hearts of riders of both the sport and the custom persuasion, for it is everything its makers claim it to be. Its engine performance equals or exceeds what most 750s can deliver, and despite the presence of shaft drive, its handling rivals that of its highly regarded brethren, the CB750F Super Sport. And sport riders and boulevard cruisers alike, it seems, approve of the Nighthawk's swoopy styling. So all in all, from both a cosmetic and a mechanical point of view, the 650SC appears to be a happy marriage of two personalities formerly thought to be incompatible.

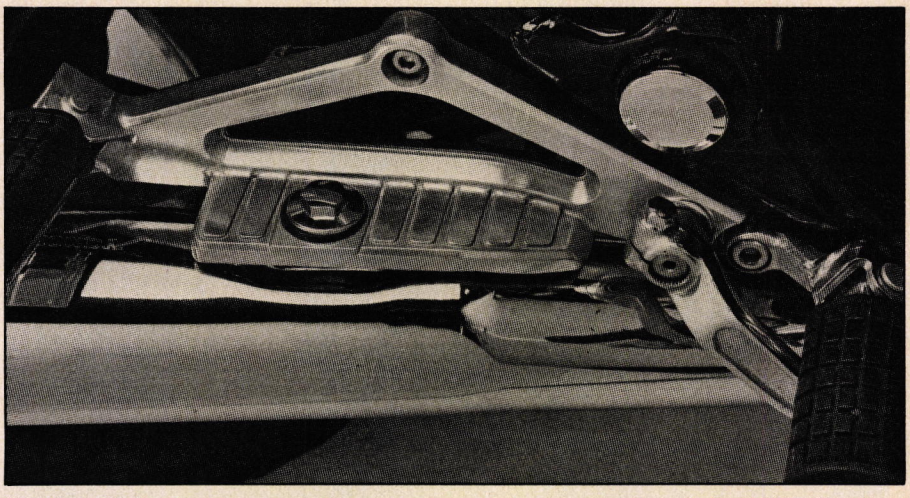
Of great significance in this newly wedded package is, of course, the SC's double-cam, 16-valve, six-speed engine, a 656cc powerhouse that, aside from a few random nuts and bolts, shares absolutely nothing with its 627cc, single-cam predecessor. And in addition to being packed with more thunder, the new engine is lighter and much more compact, measuring four inches less in width than the old 650 four and an inch and a half less than the 650 Maxim's exceptionally narrow engine. That slimness allows the SC's motor to sit low in the chassis without compromising the cornering clearance that's so vital for serious sport riding. And the engine's shortness permits a longer swingarm that helps reduce the up-and-down chassis "jacking" that upsets the handling of most shaft-driven bikes every time the throttle is rolled on or off.

Despite those dimensional attributes, though, the engine's most newsworthy aspect is that you never—repeat, *never*—have to adjust the valves. Each of the 16 individual rocker-type cam-followers sits atop a hydraulic device, called a lash adjuster, which is similar in concept to, but different in operation than, a hydraulic tappet found in automobile (and Harley-Davidson) engines (see "Formulating the Hands-Off Honda," pg. 30). And they perform the same service as the tappets in Detroit's finest, which is to automatically maintain the proper valve clearance, eliminating altogether the need for any mechanical adjusters.



Integral cast-aluminum fork brace is both pretty and practical

One of several reasons why the Nighthawk is wiggle-free during hard cornering.



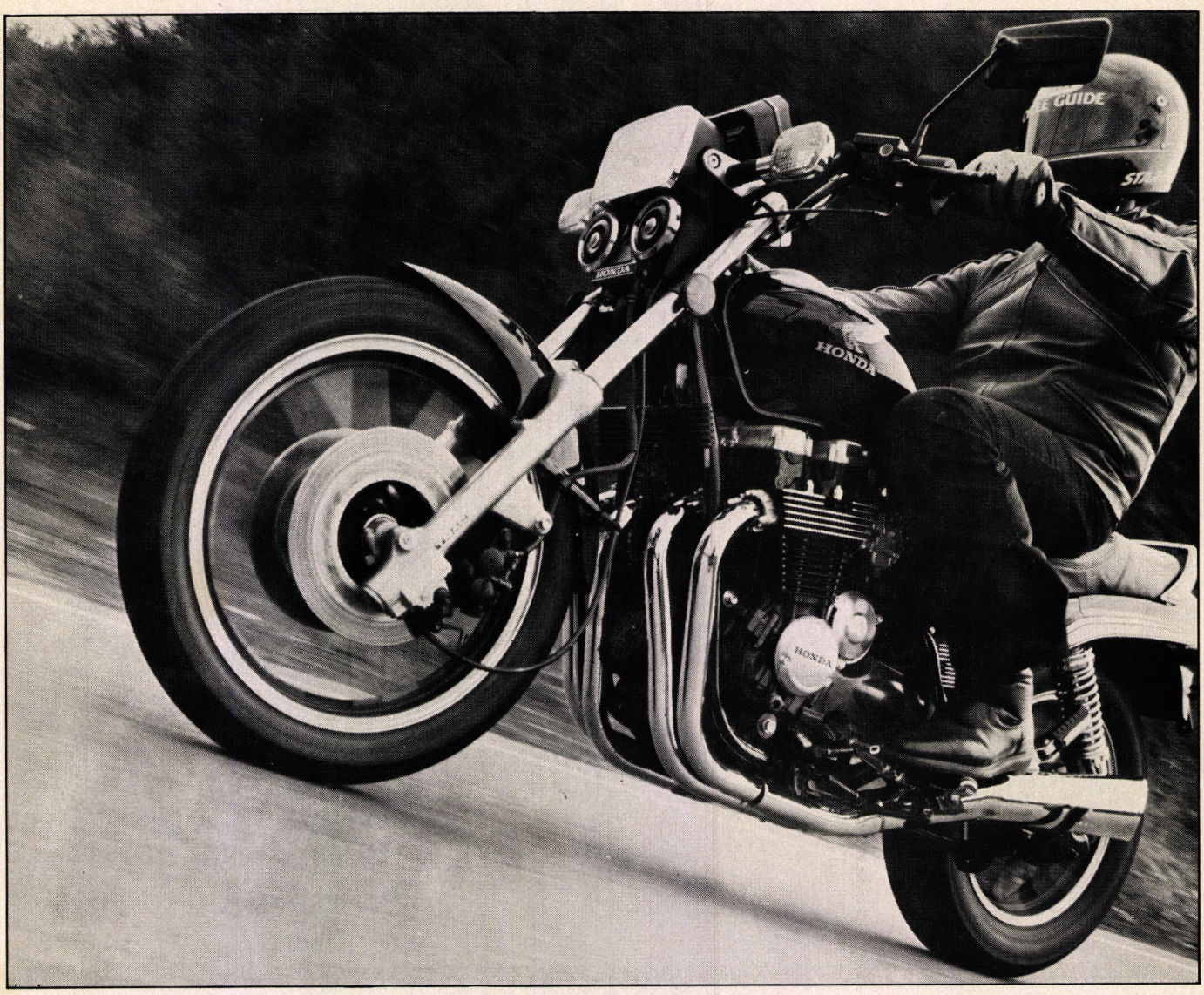
Auxiliary footrests are new for Honda but were pioneered on Yamaha's RD250/350LC

Alternative parking places for the rider's heels and the passenger's toes.

Unlike your basic Buick, however, the 650SC suffers no performance drawbacks due to having hydraulics in the valve train. The lift of its camshafts is in fact higher than normal, which is undoubtedly part of the reason why the redline is pegged at a more-than-respectable 10,000 rpm. And if you use the close-ratio six-speed to keep the tach winging in the upper one-fourth of the rev range, you're rewarded with the kind of breathtaking acceleration that even the hottest 750s couldn't muster until Kawasaki's GPz750 and Suzuki's GS750EZ came along earlier this year. That's also bad news for the Yamaha 650 Maxim, which is no match for the Honda in the quarter-mile or, for that matter, in any other contest of acceleration.

Not only that, the low-end and mid-range performance wasn't compromised in Honda's quest for big horsepower numbers. And that's an important consideration for riders more attuned to trolling and cruising than to scratching and speeding. Admittedly, the SC's roll-on acceleration in top gear won't leave you with terminal whiplash, but be aware that the sixth-gear ratio is an overdrive that's roughly equivalent to fifth gear on most high-performance literbikes. If you notch the Nighthawk down to fifth, where the ratio is more typical of top gear in the average 650 (and virtually identical to the Maxim's fifth-gear ratio), the Honda will leave any normally aspirated 650 four, including the Maxim, in its dust.

Our only criticisms of this terrific engine, then, are: It's not likely to win any fuel-economy runs (ours averaged just 37 mpg, with a high of 51 and a low of 28); there's a bit too much lash in the driveline; and the shifting could be a little better. Most gearchanges elicit an audible *clunk* from the driveline, and the first-to-second shift is



Don't let the displacement fool you; this 650 accelerates with enough ferocity to send most 750s running for cover.

often rejected if the lever isn't given a firm, full stroke with the left boot.

All things considered, though, the Nighthawk 650's engine emerges as a near-perfect powerplant for a bike that is at once both a sport and a custom. Achieving the same success with the chassis is quite another matter, however, for this is where the exigencies of custom-bike styling traditionally conflict with the strict requirements of sport performance. But the Nighthawk's designers, bless their souls, arranged their priorities so that any time styling and performance locked horns, performance won. Hence the ergonomics are closer to sport than to custom, the steering is configured to enhance cornering and not cruising, and any concessions to the cryptochopper look (16-inch rear wheel, leading-axle fork, baloney-slice mufflers) were dealt with in a way that wouldn't seriously detract from the handling program.

Thus the SC corners like a bona fide sportbike, exhibiting the same kind of precise, dead-neutral steering feel that allowed the CB750F to be the first bike on which some riders had *ever* dragged a footpeg. But no matter if the horizon is cranked over at some crazy angle or merely level, there are no twitches or wiggles to contend with, and any gyrations induced by the shaft drive are only discernible, not detrimental. The bike is easy to bank over into a hard turn, a characteristic that actually is enhanced by the custom-style seat, since its lowness helps keep the overall center of gravity down. So even when you jump on the powerful, predictable brakes (drum rear, twin-disc front aided by a single TRAC anti-dive that really works), the 650SC still is willing to heel over into a turn.

Once there, the tires stick surprisingly well, even for rubber that was chosen as much for looks as for adhesion. There's excellent cornering clearance, too, going in both directions—a bit less, naturally, than on some pure sportbikes, but enough for all but the most aggressive of riders. And since the stands and pipes are well tucked-in around the narrow engine, only the warning balls on the folding footpegs ever kiss the pavement.

Obviously, pumping the maximum recommended pressure (6 psi) into the air-assisted front fork, as well as turning the adjustments for spring preload and rebound damping all the way up, will improve the cornering clearance. Ah, but not the overall handling, for at those settings the Honda then overreacts to paving irregularities in the turns. Sometimes the wheels chatter, sometimes the whole bike is jounced offline. And the stiffest of the four rebound

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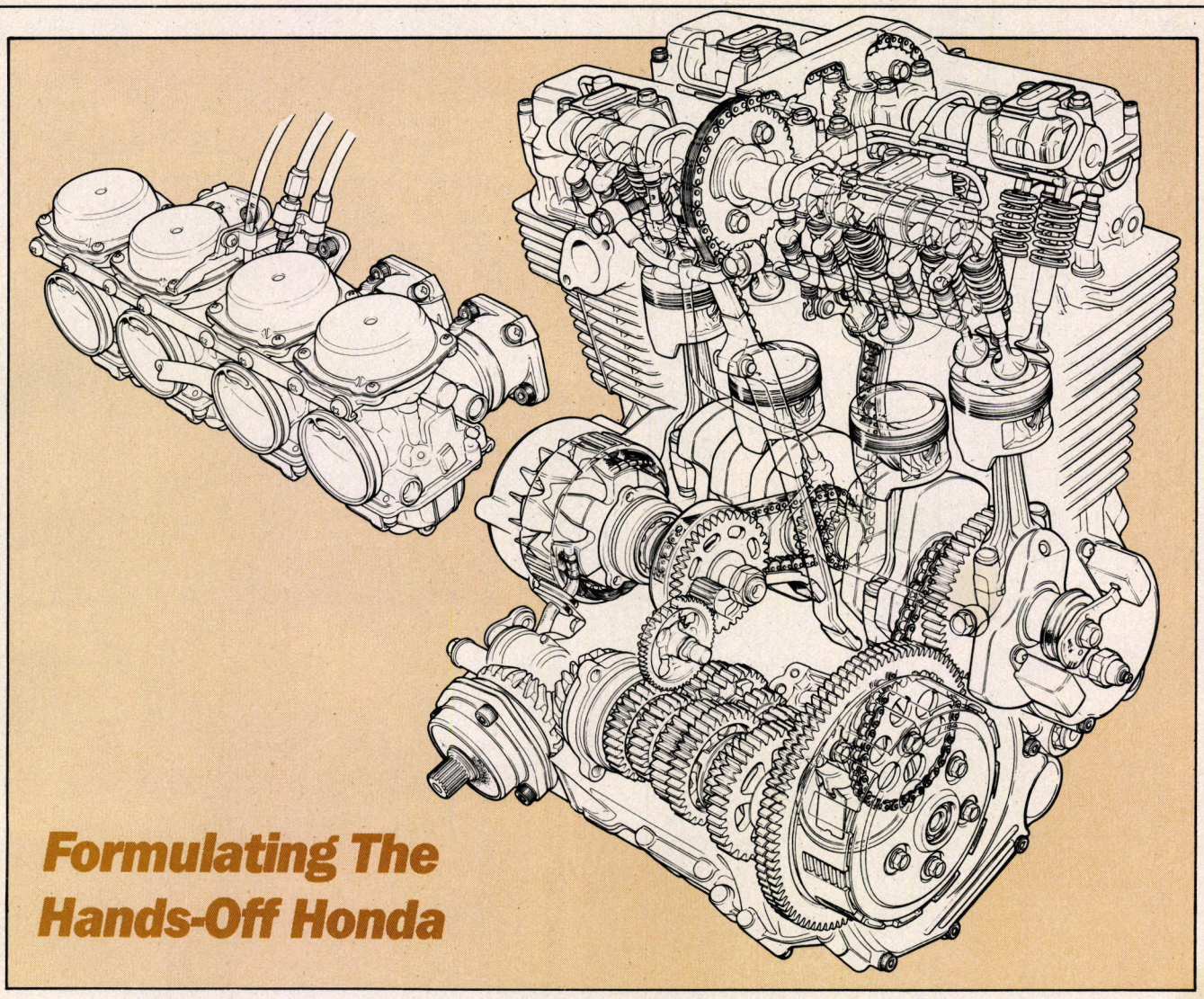


Formulating The Hands-Off Honda

• While you're down at the Honda shop signing up for a new Nighthawk 650, wander back into the service department and have someone point out the tune-up specialist. Because with any luck at all, that will be the only time you'll ever have to lay eyes on him. The CB650SC, you see, is the closest thing to a no-maintenance motorcycle ever built, the first of a new generation of Hondas specifically engineered to make routine maintenance practically non-existent. And any areas of the Nighthawk that *do* need periodic attention are few, far between and easily dealt with, even by a rider of limited mechanical means.

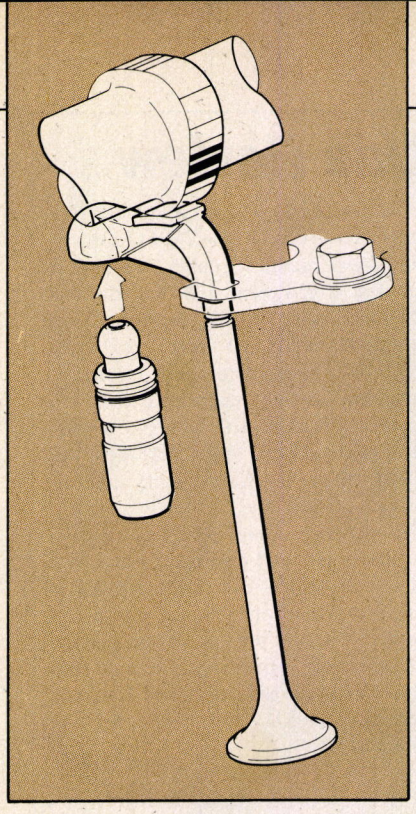
It took no sophisticated technology to accomplish this feat, since all of the SC's maintenance-free features were, in one form or another, already in use, either on another Honda or some other brand of motorcycle. All the Nighthawk's designers did, really, was to integrate a lot of existing ideas into one machine.

Like all modern motorcycles, for instance, the 650SC has a breakerless electronic ignition that never needs attention, plus factory-balanced CV carbs that, due to the limited range of adjustability allowed by the government's emissions regulations, shouldn't ever require the services of a qualified mechanic. You leave them alone and they'll leave you alone. And the Nighthawk has two systems borrowed from Honda's innovative VF750 vee-fours—a spring-type automatic cam-chain tensioner and a hydraulically actuated clutch—that are so completely self-regulating that there aren't even any provisions for making adjustments on either one.

Ironically, though, the only maintenance-reducing feature on the CB650SC that could be termed even remotely new actually uses the *oldest* technology. It's the Nighthawk's automatic valve-adjusting system that incorporates 16 little cylindrical devices, one per valve, that are not unlike hydraulic tappets. And in case you didn't already know, hydraulic tappets have been around a long, long time—30 years in Harley-Davidsons and a lot longer than that in automotive engines.

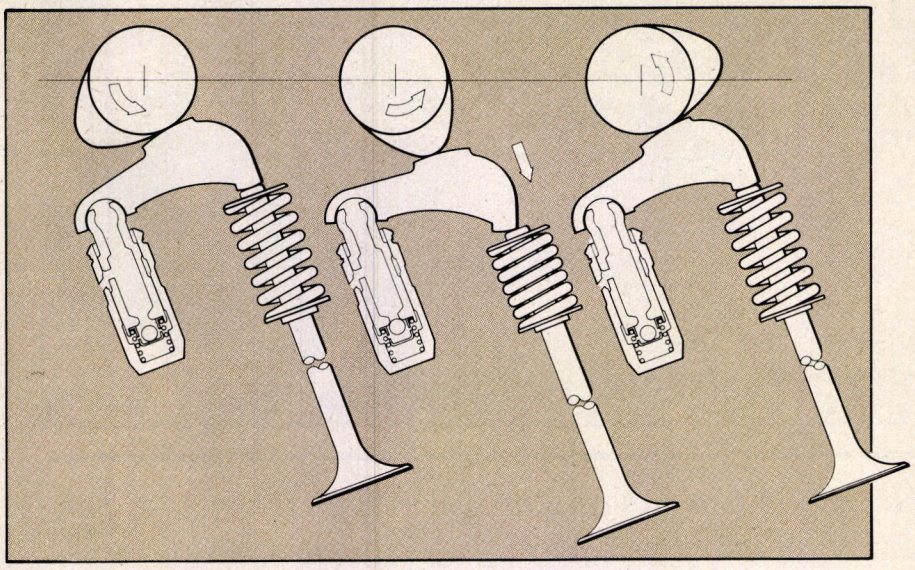
The aforementioned, however, have mostly been pushrod-type engines of a low-revving nature, whereas the Nighthawk is a double-overhead-cam, 10-grand screamer; so Honda's execution of the concept had to be somewhat different. The SC's hydraulic mechanisms, in fact, really are not "tappets" at all, since the cam lobes do not work directly on them nor do they move up-and-down as in a pushrod engine. Instead, they are called "lash adjusters" and are anchored in the SC's cylinder head, where they serve as fixed pivot points for the rocker-type cam followers.

Nonetheless, the location of the lash adjusters may be different than that of regular hydraulic tappets, but their purpose is the same. They are hydraulic plungers of sorts that are part of the valve train; and their purpose is to automatically take up all of the freeplay between the valve stems and their corresponding lobes when the valves are closed, and to automatically compensate for any changes in that free-



Lash adjuster sits under cam follower

Looks like a tappet but isn't.



Valve-opening sequence shows operation of poppet ball inside of lash adjuster

Saying hello to the magic of hydraulics, bye-bye to the drudgery of maintenance.

play as engine temperatures vary or as the valve-train components wear due to normal use. The result is quieter operation and no periodic valve adjustments.

That sounds rather complicated but it really is not. All a lash adjuster is, basically, is a hollow, two-piece steel cylinder that is pressure-fed with engine oil and fits between the head and the underside of one end of a cam follower. The lower part of the adjuster's cylindrical body is fixed to the head; the upper part can slide in and out of the lower part, and any up-and-down movement of the upper piece causes the cam follower to do likewise. When the valve is closed, a spring inside the adjuster body pushes the top part of the adjuster upward, forcing the cam follower to move up and contact the camshaft—not hard enough to open the valve, but enough to take up all the freeplay between the cam and the follower, and between the follower and the valve stem, as well.

When the cam lobe comes around and tries to open the valve, however, the lash adjuster then needs to be a solid unit rather than a spring-loaded variable in the valve train; otherwise, the downward pressure on the follower exerted by the lobe would simply compress the adjuster instead of opening the valve. So when the follower starts to push down on the top half of the adjuster, it creates a rise in pressure in the oil within the body. That pressure increase forces a little ball-check valve inside the body to close, preventing any oil from escaping. And since, as everyone knows, a liquid cannot be compressed, the lash adjuster effectively becomes a solid, non-compressible unit, and so the cam lobe successfully forces its intake or exhaust valve open.

There usually is a major drawback to using hydraulic tappets in a high-performance engine, since at extremely high revs the little ball-checks can't react quickly enough to keep the oil from escaping the body. But Honda has taken that into consideration with the Nighthawk's lash adjusters and developed a poppet-ball system that can handle the 10-grand redline. And the fact that the Honda's hydraulics are stationary greatly benefits their high-rpm efficiency, since they don't get bounced up and down (80 times a second at 10,000 rpm), which can confuse the ball-checks.

What all of this self-adjustment business means, then, is that you won't be putting much mileage on the Nighthawk's toolkit over the years. Oh, the factory does recommend an oil change every 4000 miles, along with a major tune-up every 8000. But even the latter is something just about any rider can do himself, since a full-blown tune on a CB650SC involves absolutely nothing other than screwing in four new sparkplugs.

So, all of you potential CB650SC owners out there, we'd like you to meet the new factory-authorized tune-up specialist around your house: *you*.

—Paul Dean

COMPARATIVE TEST DATA:

Make and Model	Quarter-Mile, sec/mph	Top Speed, mph	Weight, lbs	Stopping Distance From 60 mph, ft.
Honda Nighthawk 650–'83	12.29/108.0	122	451	128
Yamaha XJ650 Seca–'82	12.83/103.4	125	469	135
Suzuki GS650GL–'82	NA	123	472	NA
BMW R65 LS–'82	14.15/92.4	110	417	138
Kawasaki KZ650CSR–'81	NA	116	473	NA
Yamaha XJ650 Maxim I–'80	12.60/107.4	120	453	128

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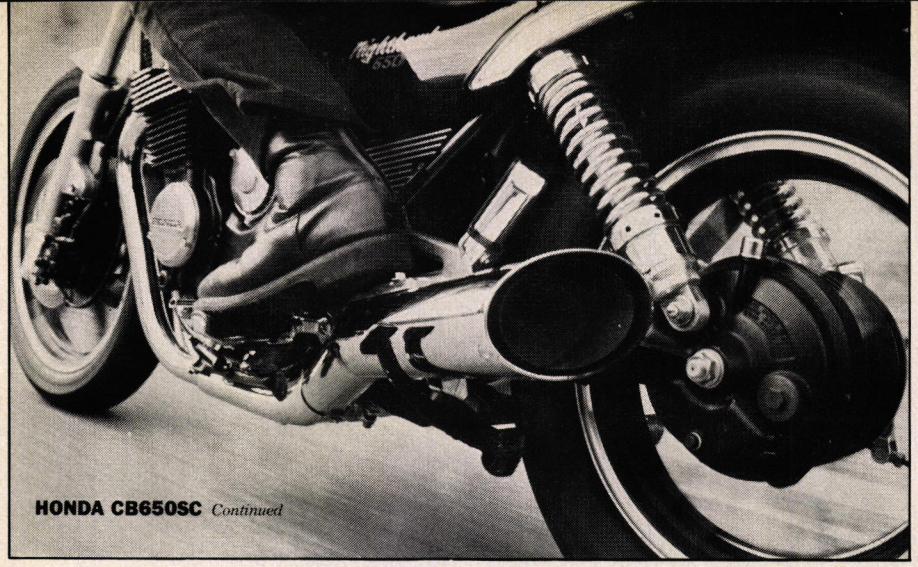


The CB650SC is not an exercise in high technology but instead an intelligent packaging of ideas already in use.

settings is not stiff enough to cope with maximum spring preload, so the rear suspension tends to extend too quickly.

As long as you're not continuously running out of cornering clearance, then, it's best to leave the suspension at its softest. That's also where you'll get the best ride, which is a little choppy in any case. The big, rolling bumps pass beneath the Nighthawk's all-new six-spoke cast wheels almost unnoticed, but the smaller, more abrupt ones do not. Overall ride quality ranges between good and acceptable, but the rider is often dealt a sharp jolt that he'll remember for a few seconds if the suspendion is on full-soft. If it's on full-hard, though, he's liable to remember it for a few minutes, maybe hours.

That's too bad, because otherwise, the CB650SC transports you with a surprising amount of comfort when Point B is a long way from Point A. The engine is rubber-mounted and, at times, so smooth and free of mechanical clatter that only the whine of the straight-cut primary gears reminds you that it's even running. Then there's the seat, mildly stepped to conform to cruiser styling specs but executed in an intelligent fashion. It's wide, well-padded and properly contoured, and best of all, the rider's segment is long enough to allow a reasonable amount of fore-and-aft movement. Since you're not locked into one spot as you are with most custom-type stepped seats, you can stave off numbbutt more effectively on long rides simply by being able to move around.

Sport riders should, then, appreciate the seat, even though it looks more like something you'd see on Badass Boulevard than on Racer Road. But the custom crowd may not reciprocate by endorsing the rest of the SC's ergonomics, which strongly favor sport riding. The all-important seat/bar/peg relationship is roomier than the 650 Maxim's and conducive to spirited romps through the twisties, but it doesn't bend the rider into the requisite laid-back cruising posture. Much of that, of course, could easily be remedied simply by swapping the SC's medium-rise, semi-sport bar for higher-rise pullbacks. And while that might seem bothersome to the custom guys, it is one compromise that is perfectly justifiable, since high-speed, flat-out cornering control was at stake.

Actually, what's surprising is how few compromises there are anywhere on this particular Nighthawk. Honda is to be applauded for incorporating so many disparate elements (custom styling, sport performance, shaft drive) into one bike and making them work in unison. The result is a new kind of motorcycle that has strong, legitimate appeal to two segments of the market in which the riders have little more in common, really, than the love of traveling on two wheels.

Which is not to say that the Nighthawk 650 is the definitive sportbike or the ideal custom. It is not, and so inveterate knee-draggers and avowed night-stalkers will walk right past it in the showroom to get at a pure, untainted model more to their liking. But for the majority of riders in these two almost mutually exclusive categories, the CB650SC is worthy of serious consideration. For not only is it perhaps the industry's first real alternative to a pure sportbike or a pure custom, it's a major breakthrough in another critical area, as well:

A bike that can steal headlines and pay bills, too. ●

Ride Review

• I'm not going to tell you about the mechanical novelties on the Nighthawk, or about how it handles equally well both a Saturday night cruise down Badass Boulevard and a Sunday morning blitz through Racer Road. You've already heard about that. And those qualities, outstanding as they are, aren't what impress me most about this bike. No, it's the styling of the 650SC that I find most appealing; this is the first factory custom with looks that I like.

You see, every time I get on a bike with a buckhorn bar and a stepped seat I feel, well . . . out of place. But the Nighthawk is different; all of its cruiser parts are subdued, without any out-of-proportion grotesqueness. Honda might call this Flow-Through styling, but I call it Hurricane. And the Hurricane, for me, *was* a custom. *—Joe Kress*

• With the second coming of the Nighthawk, Honda hit its designated target—that vulnerable window between sportbike and a custom—right on the bullseye. And why not? The class was there for the creating, and the Nighthawk works better in sport mode than most custom-styled motorcycles, without exacting as severe a penalty from the rider with its cruiser trappings. Besides, it's hard *not* to like a fast, spooky-smooth, high-revving engine that can turn low-12-second quarter-mile times, especially when it's in a chassis that handles as well as this one does.

It's far easier, however, for me to dislike the styling, particularly such elements as the flabby-looking tank and the boloney-slice mufflers. While I can easily appreciate the Nighthawk's cornering competence, I would prefer to see it in a less custom-oriented livery. *—Charles Everitt*

• Look, I find wrench-spinning as therapeutic as the next guy—maybe more so. Nothing is quite so rewarding as a day out in the garage, making sure that a motorcycle is *right*. But I'm not about to penalize a motorcycle that doesn't require it, and one of the Nighthawk's marching orders is to let you leave tools neatly in toolbox, and concentrate on riding. A noble gesture, as far as I'm concerned.

Besides, who *wouldn't* want to concentrate on riding a lightweight 650 whose dragstrip performance would have brought a leer to the lips of any literbiker just a few years ago? And who would rather fiddle with than flog a skinny-hipped four with enough ground clearance to let you test your nerve as well as your riding ability? The obvious place for the Nighthawk is the road, not a motorcycle lift. If you need to tinker, get a hobby.

—Larry Works

CYCLE GUIDE SPECIFICATIONS

Honda CB650SC Nighthawk — street

IMPORTER: American Honda Motor Company, 100 West Alondra Boulevard, Gardena, California 90247

SUGGESTED RETAIL PRICE: $2798 (approx.)

ENGINE

Type ..... four-stroke transverse vertical four
Valve arrangement ..... double overhead camshafts, four valves per cylinder
Bore and stroke ..... 60.0mm x 58.0mm
Displacement 656.0cc
Compression ratio 9.5:1
Engine redline ..... 10,000 rpm
Carburetion ..... four 29mm Keihin constant-vacuum
Air filter ..... disposable paper element
Lubrication ..... wet sump
Starting system ..... electric only
Ignition ..... transistorized breakerless
Charging system ..... 12-volt; 280-watt alternator, voltage regulator/rectifier, 12-ampere-hour battery

DRIVETRAIN

Primary drive ..... straight-cut gears; 1.704:1 ratio
Clutch ..... wet, multi-plate
Transmission-to-driveshaft drive ..... spiral-bevel gears; 1.125:1 ratio
Driveshaft-to-rear-wheel drive ..... spiral-bevel gears; 3.091:1 ratio

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.769	16.404	4.5
II	1.850	10.960	6.7
III	1.429	8.466	8.7
IV	1.154	6.837	10.8
V	0.966	5.723	12.9
VI	0.821	4.864	15.2

SUSPENSION/WHEEL TRAVEL

Front ... Showa air-spring, 39mm stanchion tube diameter, brake-actuated hydraulic anti-dive/ 5.8 in. (148 mm)
Rear ..... dual Showa shocks, 5-way adjustable spring preload, 4-way adjustable rebound damping/ 4.6 in. (118mm)

BRAKES

Front ..... dual single-action hydraulic calipers, 10.9-in. (276mm) discs
Rear ..... drum, single-leading shoe, rod-operated

TIRES

Front .... 100/90-19 57H Dunlop Gold Seal F-11 tubeless
Rear ..... 130/90-16 67H Dunlop K627 tubeless

DIMENSIONS AND CAPACITIES

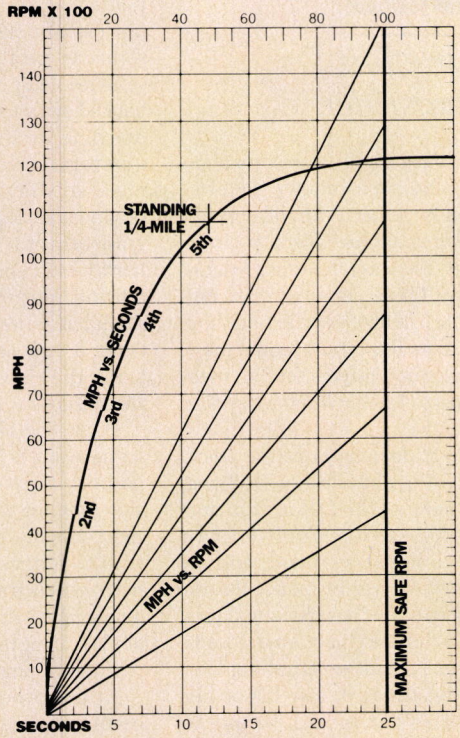
Weight ..... 451 lbs. (204.5kg)
Weight distribution ..... 47.7% front, 52.3% rear
Gross vehicle weight rating (GVWR) ..... 820 lbs. (372kg)
Load capacity (with full fuel tank) ..... 348 lbs. (158kg)
Wheelbase ..... 57.8 in. (1467mm)
Seat height ..... 30.7 in. (780mm)
Handlebar width ..... 29.6 in. (752mm)
Footpeg height ..... 12.4 in. (315mm)
Ground clearance ..... 5.8 in. (147mm), at exhaust header pipes
Steering head angle ..... 28.5 degrees from vertical
Front wheel trail ..... 3.86 in. (98mm)
Frame ..... tubular mild steel, double front downtubes
Oil capacity ..... 3.4 qt. (3.2*l*)
Fuel tank ..... steel, 3.5 gal. (13.2*l*), including 0.5 gal. (1.9*l*) reserve
Instrumentation ..... speedometer, odometer, tripmeter resettable to zero, tachometer, LCD fuel gauge, LCD gear indicator

PERFORMANCE

Fuel consumption range ... 29 to 51 mpg (12 to 22 km/*l*)
Average fuel consumption ..... 37 mpg (16 km/*l*)
Cruising range, maximum ..... 102 to 179 miles (164 to 288km)
Cruising range, reserve only ..... 15 to 26 miles (24 to 42km)
Speedometer error, 30 mph indicated ..... 28 mph actual
Speedometer error, 55 mph indicated ..... 52 mph actual
Best 1/4-mile acceleration ..... 12.287 sec., 108.04 mph (174 km/h)
Top speed (observed) ..... 122 mph (196 km/h)
Stopping distance from 30 mph ..... 26 ft. (8m)
Stopping distance from 60 mph ..... 127 ft. (39m)

WARRANTY: 12 months unlimited mileage

AVAILABLE COLORS: Pearl Blue, Candy Wineberry



MINITEST:

Suzuki DR250Z

A first-year effort for the first-year rider.

• All right, you Pros and future Pros, you probably think the performance requirements for a good beginner's dirt bike aren't very tough. All a machine needs is unintimidating power and easy handling, right? Well, not exactly. Those characteristics certainly are valuable to a first-year dirt-dabbler, but there's a far more important requirement that manufacturers and buyers tend to overlook: The bike has to leave room for the rider to grow in experience.

Suzuki's DR250Z demonstrates the point. It matches the first qualification with flying, blue-and-white colors—the DR isn't intimidating. The four-stroke single has an extremely easy-to-use powerband, and an abundance of flywheel weight makes the engine slow-revving even by thumper standards. An accidental twist of the grip or an unsteady throttle hand won't result in anything that could cause a first-timer to lose his or her nerve. The DR also has enough torque to make those first experiments with clutch engagement as painless as possible. With such easy-going power, the DR could be the perfect argument to convince your grandmother to take up dirt riding.

Your grand*father*, however, would probably call the DR slow. It isn't that the engine holds no potential—the four-valve TSCC powerplant has the unfulfilled promise of someday performing with the best of the quarter-liter thumpers. But Suzuki has backed away from making the DR into a race machine and concentrated on building a quiet, reliable playbike. The DR's automatically tensioned Hy-Vo-type cam chain produces little noise, and its helical primary gears and spark arrestor/silencer combo are hardly loud enough to catch a librarian's attention. But the cost of this social responsibility is power; in the DR's stock state of tune, it has the unenviable distinction of being the slowest bike in the already-slow 250cc four-stroke-single category.

When the DR does achieve higher speeds, its handling is just as disappointing. It has an odd combination of a short wheelbase and slow steering that makes the machine downright difficult to turn at speed. When the rider tries to initiate a playful slide, for instance, both wheels start to drift at the same time; so a new rider's first few ventures into the realm of playracing may leave him with a somewhat frightening impression.

At least the DR's suspension provides a high-performance saving grace. The front fork has 9.7 inches of travel and the Full Floater rear suspension delivers a 10.3-inch wheel-stroke. Both ends are soft, but they work well at almost any speed. The DR isn't in over its head on anything short of full-sized motocross whoopdies. The shock even has four-way-adjustable rebound damping like on the RM motocrossers, but we rarely switched from the Number-Three position.

Unfortunately, the rest of the DR isn't in the same league as its suspension. The Kayaba fork and shock seem almost out of place, because by the time a rider's ability develops to the point where he can fully appreciate the bike's shock-absorbing capabilities, he runs smack into the machine's other shortcomings. Then he's forced to park it and move on to a more appropriate intermediate-level mount. And that leaves the DR as a machine that is limited, even for a beginner. It's useful either to riders who only play in the dirt once or twice a year, or to learners who don't plan on learning.

—Ron Lawson

SUZUKI DR250Z

Importer: U.S. Suzuki Motor Corporation
3251 East Imperial Highway
Brea, California 92621

Category	trail
Suggested retail price	$1598
Engine type	four-stroke vertical single
Valve arrangement	single overhead camshaft, four valves
Bore and stroke	72.0mm x 61.2mm
Displacement	249.2cc
Compression ratio	8.9:1
Carburetion	one 28mm Mikuni slide/needle
Gearbox	5-speed
Front fork/wheel travel	Kayaba air-spring, 36mm stanchion tube diameter/9.7 in. (247mm)
Rear shocks/wheel travel	single Kayaba shock, 4mm spring preload adj., 4-way adj. rebound damping/10.3 in. (261mm)
Wheelbase	55.7 to 56.7 in. (1415 to 1440mm)
Seat height	36.0 in. (914mm)
Weight	259 lbs. (118kg)
Steering head angle	28.2 degrees from vertical
Front wheel trail	4.61 in. (117mm)
Top speed (observed)	66 mph (106 km/h)
Warranty	90-day unlimited mileage (with Nov-Dec-Jan winter extension)
Available color	white only

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Suzuki hits thumper road

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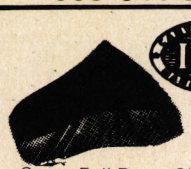

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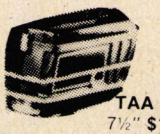

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PRODUCT EVALUATION:

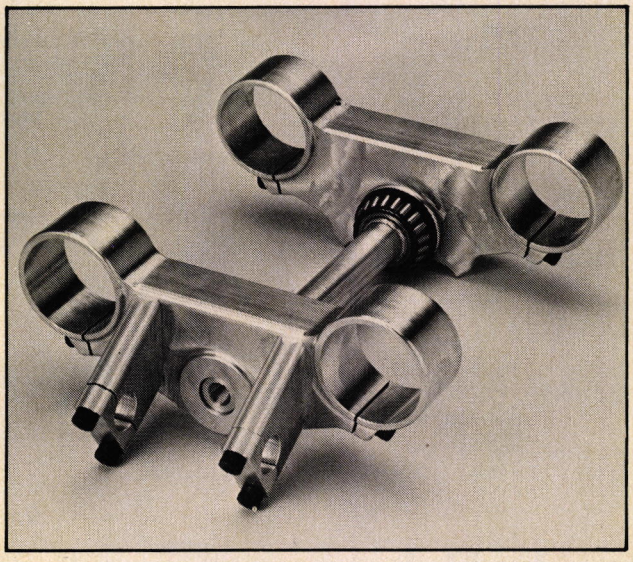
Simons UDX-60 Fork

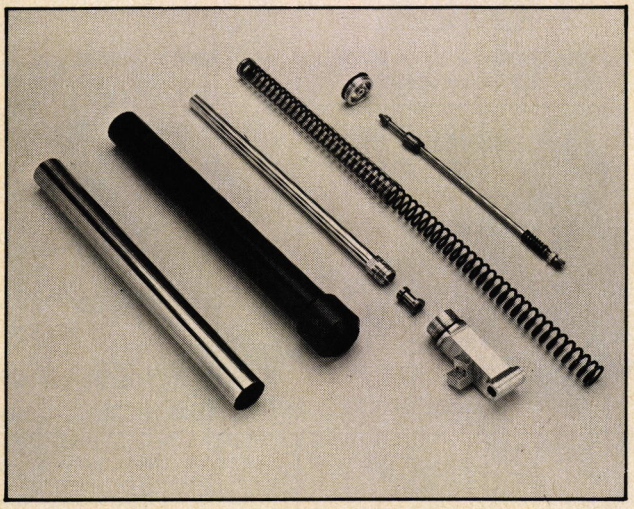
Turning the suspension world upside-down.

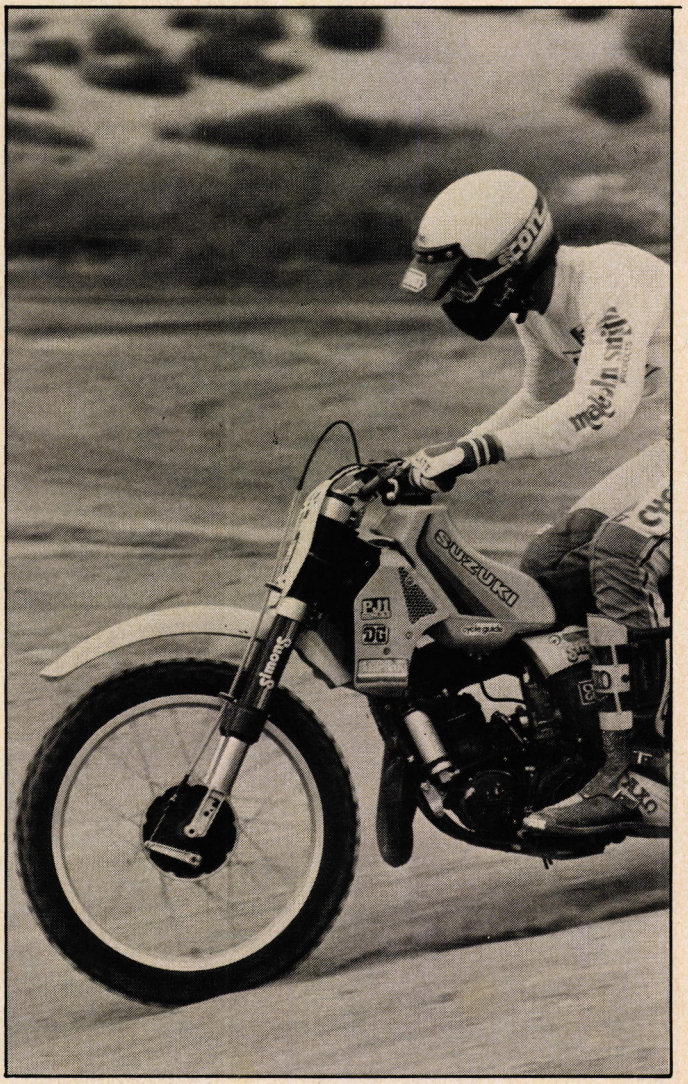
• Brad Lackey and the Simons UDX-60 fork are destroying the foundations that uphold one of motocross racing's most basic institutions: workslust. Since the Japanese factories first wrapped their sand-cast, non-production fists around world motocross competition, it's been a cold, hard fact that no matter how much you were willing to spend, you couldn't have a single part off a world-championship machine. But when Lackey shelved his works KYB fork in favor of the UDX in the 500cc Grand Prix series earlier this year, the You-Can't-Have-It syndrome began to crumble.

Even though the Simons UDX-60 fork is available to anyone willing to ante up the $679 suggested retail price, it's hardly an ordinary production fork. It's the first truly different front suspension design to be offered to the MXing public since telescopic forks became universal. And what makes the UDX fork special isn't just the fact that it is built upside-down—that is, the stanchion tubes connect to the axle, while what would normally be called sliders are held in the triple clamps—it's also that the internal valving is like that in no other fork. The UDX-60 is built more like a shock than a fork, for instead of a series of fixed orifices to control damping, it uses flexible-washer valving, similar in concept to that used in Ohlins shocks. High-, medium-, and low-speed damping can be independently altered on both the compression and rebound strokes through changes in washer thickness and jet sizes. And with optional Simons parts, each of the six different stages of damping can be adjusted three ways, giving the UDX fork a total of 729 ways in which its damping can be mechanically adjusted. Multiply that by two spring options and three different preload spacers, and the fork can be adjusted to any one of 4374 different combinations. And that's *before* oil level or viscosity have been figured into the equation.

But adjustability is only half the story with the UDX fork. Although the upside-down construction is really nothing new, the concept is one that makes sense. First of all, the fork can be made shorter. On a traditional fork, the space between the upper and lower triple clamp is wasted—the







PHOTOGRAPHY © 1982 VIC HUBER

The production Simons UDX fork is virtually identical to the fork that carried Brad Lackey to the world championship

In construction, performance and adjustability, the UDX is a works fork, but with one difference: You can buy it.

slider can't travel past the bottom clamp. But because the UDX's fork tubes slide inside of the larger upper-tubes, all of the fork's length is put to use. So the normal extension below the axle can be eliminated, along with the chance of catching it on ruts and course banners.

Also, the shorter the fork the less it weighs, and weight was a very important consideration in the building of this fork. With the triple clamps, the UDX assembly weighs 23.5 pounds. By comparison, a stock RM250Z fork, which is one of the lightest in the industry, weighs 26 pounds. Despite its relative light weight, though, the UDX looks large and bulky. And it *is* big; the upper tubes are 60mm in diameter, and the stanchions measure 50mm. But the idea is to eliminate as much flex as possible; and the large diameter provides more rigidity and greater clamping area while thin-walled tubing helps keep the weight low.

And as you might expect, flex just isn't a problem with this fork. You probably never counted fork-flex as one of the top 10 evils of motocross, but it's there. And you won't realize *how much* it's there until it's been eliminated, or at least greatly reduced. The stadium-style washboard whoopdies that are becoming more and more common on local tracks are the most brutal punishment a fork can suffer through. But the UDX keeps the front end pointed straight over the same sections that would have a conventional fork twisting and turning all over the track. Even the Incredible Hulk can't keep a bike going straight if the front wheel doesn't point in the same direction as the handlebar; with the UDX, though, where the bike is pointed is where the bike goes. The Simons fork will flex, but much less than anything else on the market.

Even more impressive is the UDX's ability to smooth-out the track. The only reason for front suspension is, after all, to absorb bumps, and the Simons unit does that as well as anything made. Wheel travel measures 11.4 inches, and in this case, that's enough, because it's the fork's adjustability that sets it apart. If you can't find one of the aforementioned 4374 settings that will work perfectly for whatever you want to do, you either weigh more than the entire Dallas Cowboys' defensive line or you're on a track with whoops that have snow on top.

Actually, for most situations you probably won't even have to dive into the fork's damping entrails. When we first rode our Simons-equipped RM250Z, we felt that either the spring rate was too low, or the high-speed compression damping was too light. The problem was over-diagnosed, though, and an increase in oil level provided a simple cure. The fork was set up well for our Suzuki as delivered, so we didn't have to worry about finding the perfect combination—a process that could be quite time-consuming, considering all the options.

A different angle on front suspension

11.4 inches of flex-free travel.

But we did worry about the fork's vulnerability to damage. The Simons' fork tubes live in the primary roost range, and it doesn't take a very large nick or ding to ruin a fork. Simons does make an optional fork protector, which Lackey used on some of the rockier courses on the GP circuit, and he had no troubles throughout the year.

Fine, you say. Lackey can afford to replace the sliders if they're damaged, but you're going to have a hard enough time scraping together the initial price. Well, $679 may seem expensive if you're going to unbolt your stock, already-good fork and throw it away, but consider this: The production Kayaba forks that are standard on most Japanese motocrossers carry retail prices of between $400 and $600. If you're already in the market for a fork, the Simons UDX is well worth the difference. And if you want world-championship performance, there are no alternatives. The UDX-60 is the only works fork you can buy for *any* price.

Simons forks are available through S.W. Simons Inc., Dept. CG, 2625 Miller Ave., Mountain View, California 94040; (415) 948-3470. —*Ron Lawson*

Bob Wehman is president and chief engineer of Spectro Oils of America and Intercontinental Lubricants Corp.

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MINITEST:

Yamaha XS400RJ Seca

The look of performance.

• At rest, Yamaha's XS400RJ Seca fairly exudes high performance. No accident there; Yamaha took pains to make the smallest Seca project an image of unabashed sportiness, and it shows everywhere you look. The narrow, new-generation DOHC parallel-twin engine is a sure tip-off, as is the Visionesque styling and Monoshock rear suspension. And the Seca takes the look a step further with its boattail section behind the saddle, a styling lick contrived to make a visual connection with past Yamaha roadracers.

The RJ's ergonomics bring this promise of performance into sharper focus. The comfortable saddle has only a slight suggestion of a step, and it doesn't hinder rider movement fore or aft. And, in conjunction with the low, narrow handlebar and rearset footpegs, the saddle allows the rider to assume a relaxed, forward-leaning position. A sporting posture, if you will.

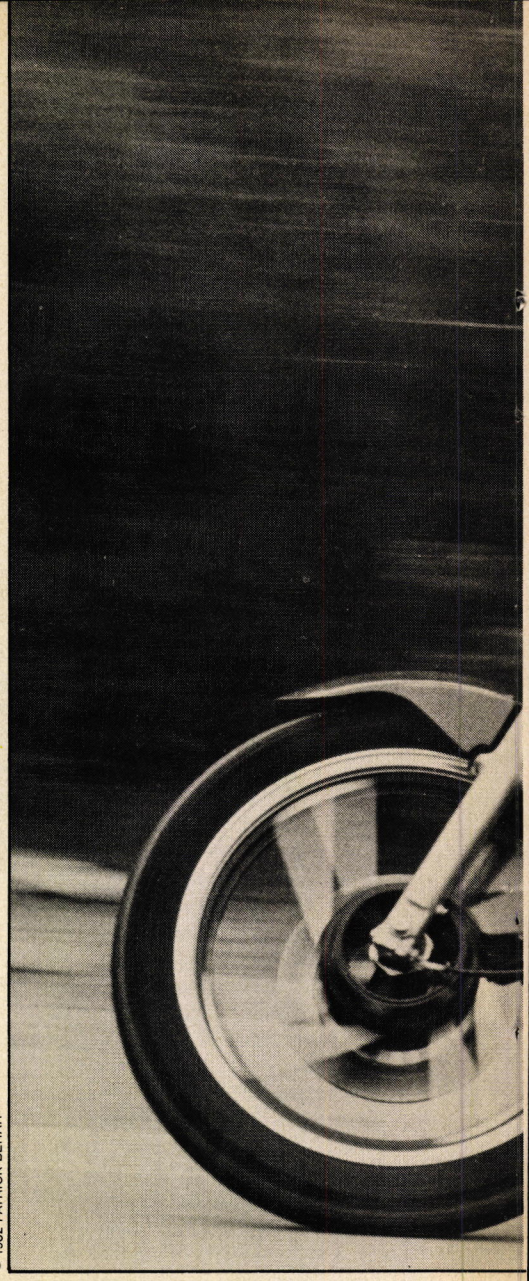
Based on such visual and ergonomic impressions, then, you could easily believe the Seca was a pure sporting tool, consistent with the heritage of RD-series Yamahas.

But you would be wrong. And you only need fire up the 399cc engine before the Seca gives the first hints that something is amiss. First, the RJ needs several minutes of warm-up before it will run without the choke. And while it is possible to ride away with the choke on, it's difficult to find a position for the handlebar-mounted choke lever that won't have the engine either bogging or screaming at a superfast idle. Nor do the carburetors provide much cooperation once the engine is warmed; the Seca has a severe flat spot off of idle and thus requires a large handful of throttle and judicious clutch-slipping to get moving.

But the carburetion problems don't end there. At engine speeds less than 7000 rpm, throttle response is underwhelming. Whacking open the dual 34mm Mikuni CV carbs results in a momentary hesitation before the engine responds; above 7000 rpm, the hesitation is less pronounced but still present. Compounding the problem is the engine's reluctance to rev quickly. The Seca *will* spin to 10 grand, but the revs build with painful slowness. And an RJ pilot will be using all 10,000 of the available rpm in all six gears, simply because that's what is required to accelerate quickly. Not that the Seca is slow; its quarter-mile times are competitive with others in its class. But to get performance from the XS400 *demands* that the engine be wound to near-critical mass at all times. Fortunately, a single-shaft, dual-weighted, gear-driven counterbalancer in the front of the engine cases keeps vibration almost completely at bay. Even at redline, the engine is remarkably smooth, allowing only a small amount of vibration to filter through to the grips.

Where the Yamaha does live up to its sporting pretensions is in handling. The steering is light and responsive, without being twitchy, and the bike will hold a precise line through corners. The suspension is adjustable only for spring preload on the Monoshock, but it does give an adequate straight-line ride. Our Seca's fork had insufficient damping, though, and easily used up all of its travel under hard braking. Refilling the tubes with the correct amount of 20-weight fork oil (15-weight is recommended) firmed up the damping and reduced front-end dive. Ride quality suffered slightly; but with the Monoshock's spring set on the next-to-stiffest preload position, the added firmness aided stability and inspired rider confidence, even in fast, bumpy sweepers. Ground clearance on the Seca is exceptional, and it takes a concerted effort to drag a footpeg. The brakes, too, reinforce the Seca's sporting guise; they're strong, provide good feedback through the controls, and fade little when used hard.

All of which leave the smallest Seca in the position of reneging somewhat on the total-performance promise of its looks. But that doesn't make it a bad motorcycle; it just means a prospective buyer should keep an old cliché firmly in mind: Appearances can be deceiving. —*Charles Everitt*



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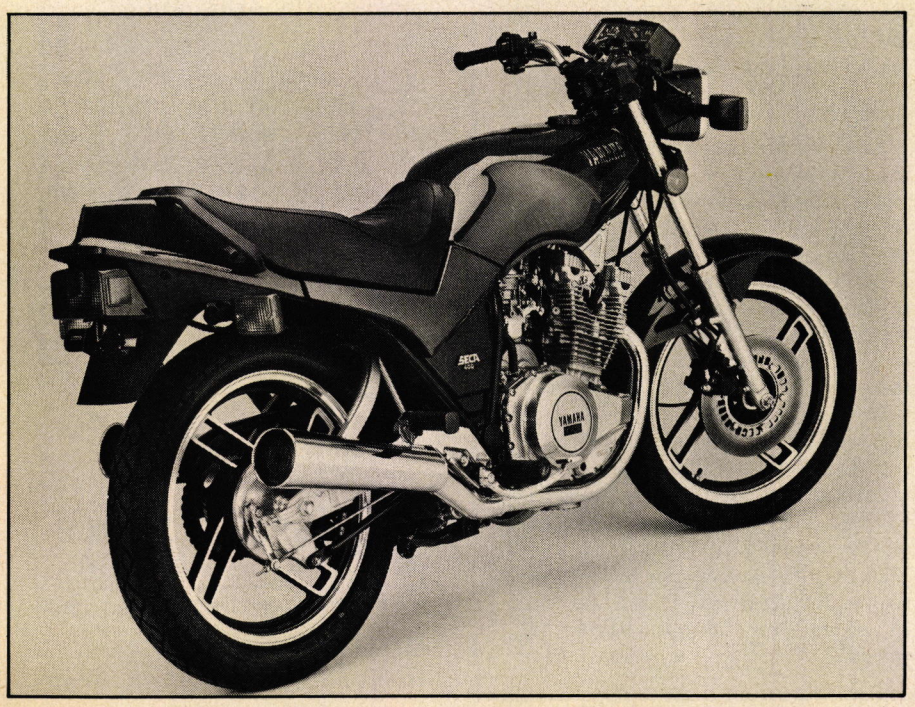

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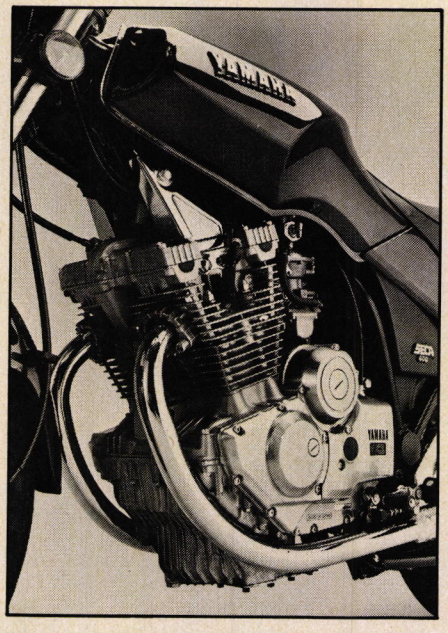
YAMAHA XS400 RJ SECA

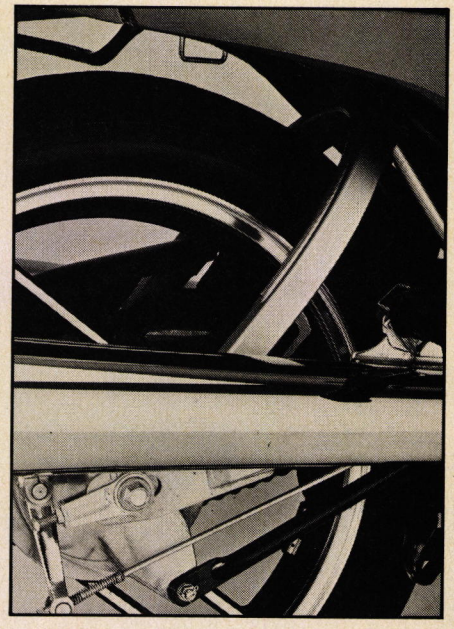
Importer: Yamaha Motor Corporation USA
6555 Katella Avenue
Cypress, California 90630

Category	street
Suggested retail price	$1999
Engine type	four-stroke vertical twin
Valve arrangement	double overhead camshafts
Bore and stroke	69.0mm x 53.4mm
Displacement	399.4cc
Compression ratio	9.7:1
Carburetion	two 34mm Mikuni constant-vacuum
Gearbox	6-speed
Front fork/wheel travel	Showa, 35mm stanchion tube diameter/ 5.0 in. (127mm)
Rear shocks/wheel travel	single Yamaha shock, 6-way adjustable spring preload/ 3.5 in. (90mm)
Wheelbase	54.1 to 55.4 in. (1375 to 1407mm)
Seat height	31.0 in. (787mm)
Weight	382 lbs. (173kg)
Best 1/4-mile acceleration	14.589 sec., 89.28 mph (144 km/h)
Top speed (calculated)	110 mph (177 km/h)
Stopping distance from 60 mph	140 ft. (43m)
Fuel consumption	47 to 57 mpg (20 to 24 km/l)
Warranty	6 months unlimited mileage
Available colors	Star Blue Metallic, Brilliant Red



Seca's performance belies its appearance

The engine is the main offender.



Old-style Monoshock supports the rear

With adjustments for preload only.

The Gold Strike of '82

BY TED WEST

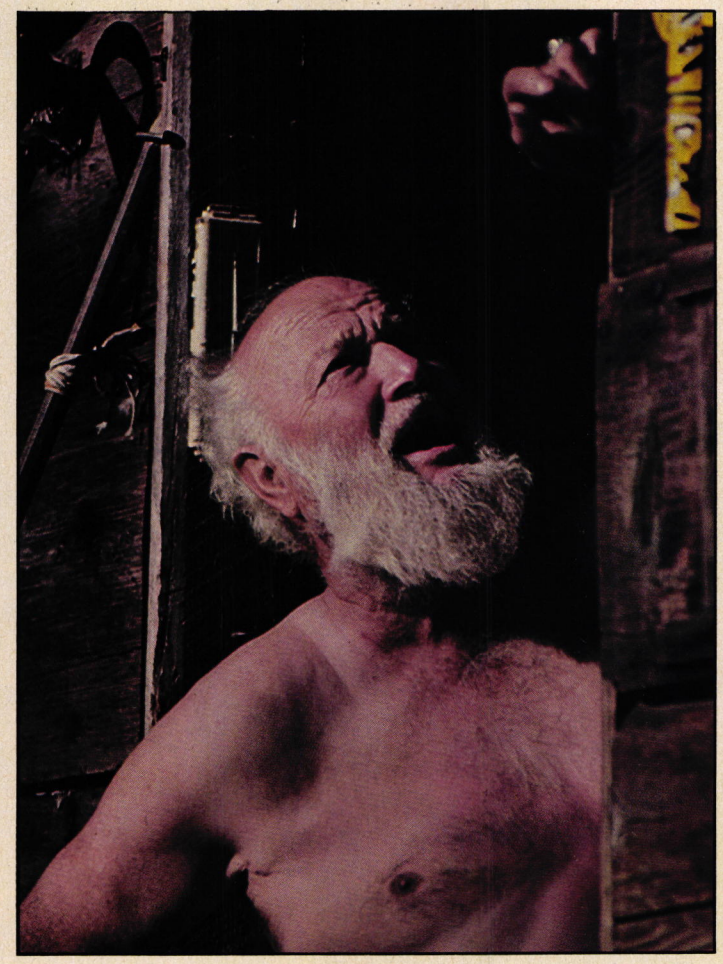
Let's face it, we balk at compromise. All the blather about Moderation and the Golden Mean to the contrary, we'd rather take it raw, thank you kindly, raw, pure and strong.

And nowhere is this preference clearer than in our motorcycles. If you're a café-racer, I won't get three seconds past hello before you're telling me about your clip-ons and bikini fairing and the lap record down at the A&W parking lot. If you're a commuter biker, I'll get to see your neato collection of parking stickers. If you're a dirt guy, you'll show me your scabs.

But what if you're a dual-purpose guy? I mean, do you tell me right off that you go both ways? Do you boast that, er, you don't know *what* kind of rider you are?

Until this past summer I had no clear idea what the answer was. For five years I've owned a dual-purpose bike, yet I still find it just flat impossible to swagger around *the guys* and allow as how I really got it on last Sunday at the dual-purpose races . . . know what I mean?

Well, if you're a dual-purpose biker like me and you're tired of taking sleek crap about it, just tell 'em you ride one because it's *the only way to get to the gold!* Don't explain. If they press you, tell 'em it's true because CYCLE GUIDE says so—and *we* know it's true because we just finished *proving* it!



We ride to Uncle Perry's to prospect for gold . . . and strike a two-wheeled Mother Lode on the way!

See, we know this crazy old coot in Plumas County up in Northern California named Uncle Perry. We aren't alone in that, of course; everyone in Plumas County knows Uncle Perry—or at least, knows *of* him. And most of them are scared dribbly of him, sometimes with good reason. Uncle Perry is a legend in Plumas County, a sourdough, gold-mining moon-goat of a mountainman who packs an M1 Garand and will be pleased to unload an eight-round clip into the twig upside your cowlick, should you chance onto his land. It's not that he's inhospitable, exactly. It just sort of helps if he recognizes you, don'tcha know? Or so the legend goes, and Uncle Perry seems quite content to leave it thataway. Keeps the crowds down.

But it was getting towards late summer, the migratory season around CYCLE GUIDE, and Joe Kress, Charlie Everitt and I were feeling the tug. With all the fine instinct of a platoon of lemmings, we knew it was time to go up and talk to Uncle Perry for a couple of days—or at least *listen* to him for a couple of days, which is the way things work at Uncle Perry's place.

To get there, however, we would have to ride 550 miles right up the sun-seared, high-summer esophagus of Central California on dead-flat, plumbline-straight, ferociously boring paved Interstate. Then we'd canyon-race up through the wonderful high-speed sweepers of Feather River Gorge. Finally, we would turn right at a secret spot marked by 25 pounds of bear dung and ride another 30 miles up and down the steepest, dustiest, rockiest, most utterly anti-motorcycle dirt trail this side of Patagonia. If we weren't in the hospital, jail or a lunatic asylum by then, we would be at Uncle Perry's place—which combines the best of all three.

In order to avoid the hospital, however, it was clear that we couldn't take any sort of proper streetbike. No matter how good you think you are, you're not good enough to get a streetbike in and out of Perry's place. And if you don't believe it, just take a look down by the Leaning Tower—the elder of Perry's two outhouses, hanging so precariously off the side of the mountain that, while seated, you hold onto a rope tied to a tree in order not to fall into the river 500 feet below. There you will see the bones of, literally, 10 or 15 bikes abandoned one-by-one

Continued

over the years as abject fear, the laws of gravity and various broken limbs persuaded the previous owners that riding back out again was gawddamn impossible.

On the other hand, if we wanted to avoid jail on this trip, we clearly couldn't take a *real* dirt bike up the interminable length of Interstate 5—not, at least, without incurring the attention of Ponch and Jon.

Whatever bikes we chose, then, would have to be street-legal and relatively comfortable at highway speeds during the Superslab portion of the trip. Then they'd have to be at least *moderately* pleasing in the delicious twisties of Feather River Canyon. And finally, they would have to be capable of getting us in and out of Uncle Perry's place without the aid of a Chinook helicopter.

All right, so it's dual-purpose bikes. But the purist in us says dual-purpose bikes are neither fish nor football. Imagine a monkey in high-heels and you've got your average dual-purpose bike, right? But the minute somebody mentions going to Uncle Perry's place, all us purists are sprinting for the garage, shoehorn and bananas in hand ....

We selected not just one kind of dual-purpose bike for our trip, but *three:* the Yamaha XT550, the Suzuki SP500 and the

After conquering freeways, canyons, fireroads and mountain trails we had made it

To a place where the payoff for a day's work can be enough to last a month.

Honda XL500—let 'em eat cake! And a hundred miles later, let 'em sweat blood! The ride up Interstate 5 wasn't hotter than the boiler rooms of Hell; it wasn't that nice. We had ample time to wonder just how much torture one extra-large, half-liter piston would take bouncing up and down in this infernal heat at, um, "a bit above" highway speeds. And despite their apparent similarities in engine size and general mission, the three bikes began to display enormously different personalities almost immediately.

On pavement, the Yamaha felt powerful, exciting, with all the high-spirited intensity of a thoroughbred, while the Suzuki was relaxed, soft, almost to the point of limpness. The Honda was somewhere between the two in temperament, not as powerful as the Yamaha, but with far more refined handling and roadability on pavement than either of the others. For all of its crypto-motocrosser looks, the XL500 felt like an extremely competent streetbike. And on the dirt, all of these personality traits reversed themselves. The Suzuki felt wonderfully compact, gentle, reassuring, and the Yamaha—particularly at very low speed or in tight going—became a stubborn, nervous, intimidating handful. Again, the Honda achieved a careful balance, behaving not quite as manageably as the Suzuki in tight going, due in part to it's higher *cg*, but managing to come *very* close. For all-around dual-purpose flexibility, the three of us were agreed—the XL500 was definitely the Easy Chair.

But for all of their different personalities, the three bikes had one thing in common: They all got us there. We met up with our friend Glenn LeFebvre in the town of Quincy, then he led us to the secret spot marked by the 25 pounds of bear droppings and we turned off the road. In the company of six other sourdoughs in three four-wheelers—all of them packed to the caprails with Brown Derby, the only beer tough enough for gold-miners—we plunked along for another 30 miles up and down Perry's trail—and I mean *up* and *down*—until we heard that pipey, tough old voice booming across the High Sierras, 260 pounds worth of stored-up, non-stop, mountainman monologue building up a head of steam in preparation for our arrival. We'd drink beer till our hair was dizzy, eat spaghetti till the Leaning Tower would have no more. We'd scratch around for gold in the river bottom—and *find* some—and just generally behave like moon-goats for a day or two. Uncle Perry would show us the

Continued

WHO CARES?

Charles Bronson, actor and motorcyclist. *"Every weekend we can, the kids and I pack our motorcycles in the pickup and head for the California hills. We enjoy the excitement and challenge of off-road riding. But we're also aware of our responsibilities—to the land and whoever else might be using it. We stick to off-road parks and approved trails, use the right mufflers and ride safely. That way, everyone can have a great weekend."*

RIDE AWARE. SHOW YOU CARE.

MOTORCYCLE INDUSTRY COUNCIL, INC. MIC

trusty, bald-tired little Honda MR175 he rides every day, and he'd tell us all there is to know about living on Mars. He'd explain about pulling your own teeth—you use a little piece of felt on the tooth so's the pliers won't slip off it! He'd talk about his salad days as a rich mining executive during the Thirties—and he knows enough about Sutton Place and the elite of New York that it's all very clearly the truth! We'd nose through his "front yard," the most bewildering collection of rusting old nondescript heavy equipment this side of a World War II battlefield. Gold-miner Tom would play his tape-recorded bagpipe music loud enough to shake dandruff out of the redwoods, and everyone would pull out their piddly little guns and shoot beer cans until Uncle Perry emptied his deafening M1 into the 1500-foot mountain across the river and it began to slump, badly wounded. We would sleep in his old cabin, built in 1866 out of milled logs dovetailed at the corners in the most beautiful joinery you're ever going to see—the cabin's good for another century, and by the sound of it, so's 70-year-old Uncle Perry. And most of all, we'd know that our migratory instincts were spot-on; this was exactly where we were supposed to be. A happier herd of lemmings you'll never find.

Gold-fever has only one known cure

And it takes these hybrids to find it.

But it was all thanks to these three high-heeled monkeys, these stoop-shouldered, waddling, heel-dragging, dunno-what-we-are motorcycles we'd ridden north from Los Angeles. They'd gone around, over or through every banana peel in their way without so much as pulling back their big, rubbery, pink lips and showing us their gums. Call 'em dual-purpose bikes if you like—we'll call 'em *all*-purpose bikes. They'd kept us out of the hospital and jail, all right, and they'd gotten us up here to Uncle Perry's place. Of course, staying out of the lunatic asylum was now strictly up to us . . . . ●

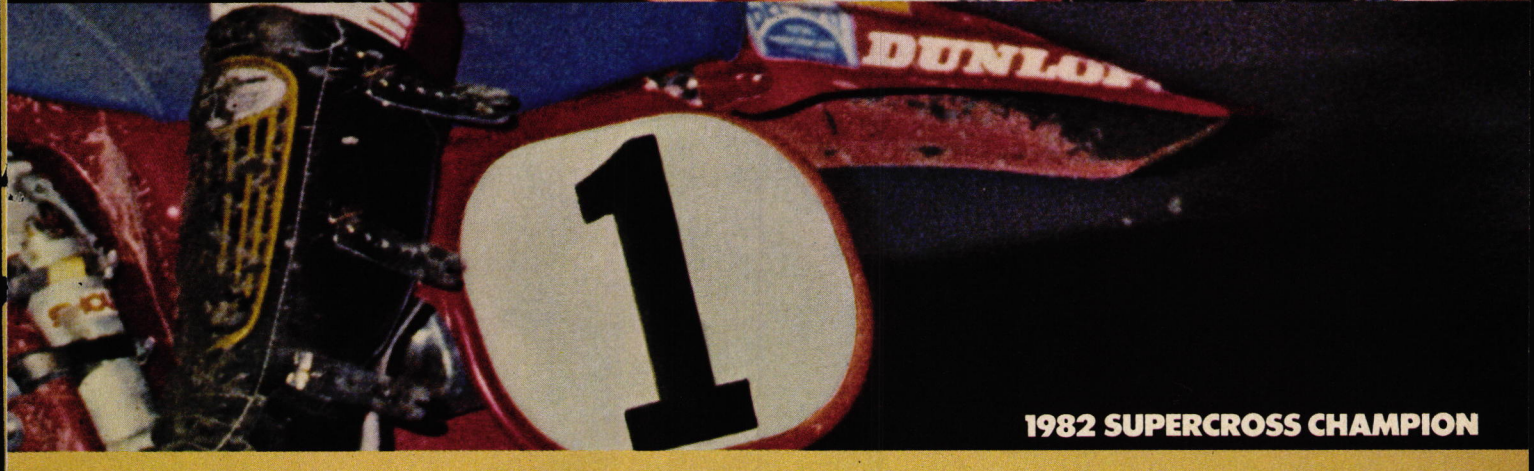
Spending a few days with Uncle Perry and a gang of modern-day sourdoughs is the best way we know to shake off the late-summer blues

Hanging around the cabin, panning in the river and swapping lies until it all seems right.

THREE THINGS TO THINK ABOUT WHEN PICKING YOUR COLORS.

1982 500 NATIONAL CHAMPION

1982 250 NATIONAL CHAMPION



1982 SUPERCROSS CHAMPION

PRO-LINK™ SMOOTHES THE WAY FOR HONDA'S 500 NATIONAL CHAMPIONSHIP.

Over the last four years one manufacturer has dominated open class motocross.

Honda.

Three world titles and two national championships back that up. Including Darrell Shultz's charge to 1982's 500 National Championship.

It's no coincidence that four years ago we started backing up our riders with the first rising-rate single-shock rear suspension system ever designed.

Pro-Link.™

Today, it's still the most sophisticated single-shock system available. Its unique location offers a lower center of gravity. And because the shock is not tucked way up inside the frame, it stays cooler to avoid fading.

For our 1983 CR480R, we've utilized high-quality precision suspension components tested and refined by Roger DeCoster and proven by Darrell Shultz. So Pro-Link offers even greater resistance to heat fade, smoother action and greater durability. And you can do some fine tuning of your own with 20 rebound and 12 compression damping adjustments.

Up front, air-adjustable 43 mm forks offer 14-way adjustable compression damping.

Of course, the heart of the CR480R is its powerful engine. Its perfect balance of

New lightweight hubs and alloy rims with straight pull spokes.

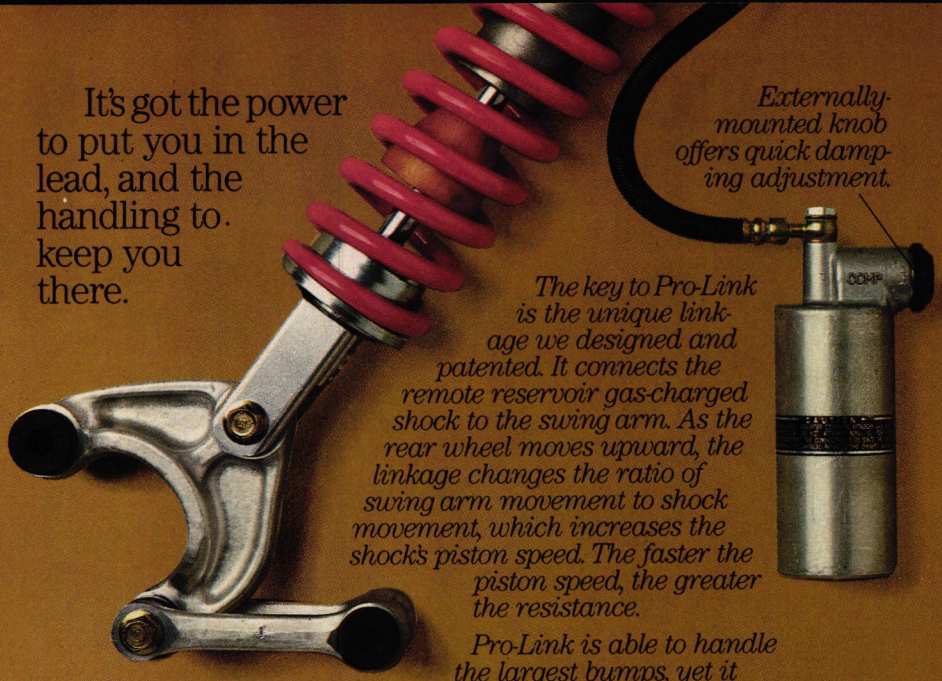
raw horsepower and torque gives you a wide, controllable powerband.

It's mated to a new five-speed transmission so you can make the most of all that power.

And with a dry weight of only 224.9 pounds, you have a motorcycle that's ready to take you to the limit.

The 1983 Honda CR480R.

It's got the power to put you in the lead, and the handling to keep you there.



Externally-mounted knob offers quick damping adjustment.

The key to Pro-Link is the unique linkage we designed and patented. It connects the remote reservoir gas-charged shock to the swing arm. As the rear wheel moves upward, the linkage changes the ratio of swing arm movement to shock movement, which increases the shock's piston speed. The faster the piston speed, the greater the resistance.

Pro-Link is able to handle the largest bumps, yet it remains compliant for the smaller stuff. Which means a smoother ride and faster lap times.

New fuel tank carries most of the pre-mix below the frame's backbone for a lower center of gravity.

Lightweight frame features bolt-on rear section for easy access to shock and air cleaner.

New works-type seat.

224.9 pound dry weight.

472 cc engine combines scorching horsepower, strong low-end torque.

New five-speed transmission.

Exclusive Pro-Link rear suspension.

WINNING TWO NATIONAL CHAMPIONSHIPS TAKES A HOT RIDER AND A COOL BIKE.

Nobody in American motocross could hold a candle to Donnie Hansen in 1982.

He burned up tracks all over the country en route to the 250 National and Supercross Championships.

And beneath him every whoop of the way was the Honda RC250. Its tremendous horsepower was maintained lap after lap by a sophisticated yet simple cooling system unique to Honda.

The same cooling system used on the 1983 CR250R production machine.

Two compact, lightweight frame-mounted radiators instead of a single large one ensure more efficient cooling and easy steering. The cylinder head has two outlets for increased coolant flow.

The engine they cool is equally sophisticated. A blend of horsepower and torque that gives the CR250R blazing speed as well as a forgivingly-wide powerband.

Making sure all that power gets to the ground is Pro-Link, our exclusive rising-rate single-shock rear suspension system. You can select from 20 rebound and 12 compression damping settings. Smoothing out the track up front are massive 43 mm air-adjustable forks with 14-way adjustable compression damping.

And the CR250R weighs an amazing 212.8 pounds dry.

The 1983 CR250R.

It's so hot, it'll give the competition chills.

THE SPEED OF LIGHT.

There are only two ways to make a motorcycle faster. Add power or subtract weight.

So we did both.

Inside the CR125R we put something totally new.

A redesigned 122 cc two-stroke engine that

New lightweight hubs with straight pull spokes.

churns out 29 horsepower* at 11,000 rpm.

Then we lowered the overall dry weight to an incredible 190.7 pounds.

And when you put that much power into a motorcycle with that little weight, you know what you get?

Trophies.

Dual-flow cooling system.
New fuel tank locates pre-mix lower for better handling.
38 mm air forks.
Lowered works-type seat.
43 mm air-adjustable forks with 14-way adjustable compression damping and 12 inches of travel.
New 122 cc engine with improved gear ratios and larger, stronger clutch.
Pro-Link rear suspension.
Our exclusive dual-flow cooling system uses compact twin radiators mounted on the frame. High enough to get plenty of air flow and low enough to provide a low center of gravity for superb handling.
New works-type seat.
Bolt-on rear frame section.
246 cc two-stroke engine delivers maximum horsepower.
Dry weight 212.8 pounds.
Exclusive Pro-Link rear suspension, with new linkage ratios, adjustable rebound and compression damping, provides 12.2 inches of travel.
*SAE net taken at crankshaft.

GIVE YOUR KID 20 HORSES INSTEAD OF A PONY.

You know what a kid learns from a mini-motocrosser with this much power?

How to be a gracious winner.

But there's more to the 1983 Honda CR80R than a fistful of horsepower.

It's liquid-cooled this year, to make sure it keeps pumping out all that horsepower all the way to the checkered flag. Yet the bike's even lighter than it was last year.

Our exclusive Pro-Link rear suspension and 31 mm air-adjustable front forks take care of the jumps, bumps and whoops.

And to make sure the rest of the bike stands up to all that punishment, we utilized a super-rigid double cradle frame and tough alloy rims.

Then we gave the CR80R something really new.

119.1 pound dry weight.

27.2 inch seat height.

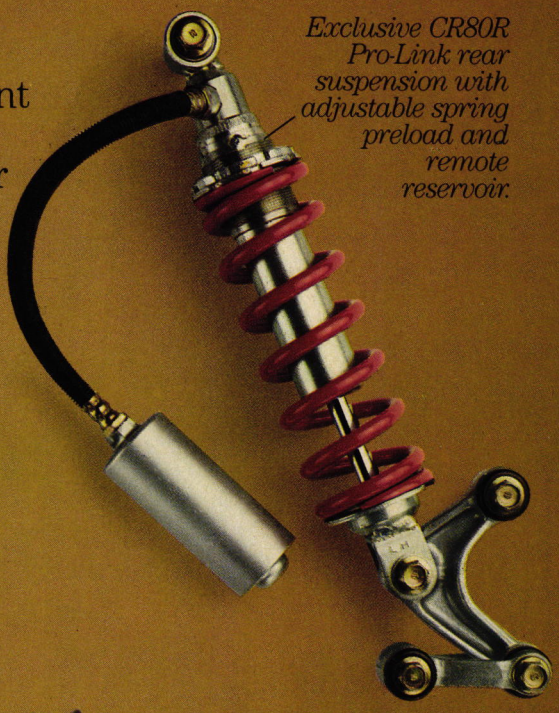
Close-ratio, six-speed transmission.

Powerful, 58 cc two-stroke engine with lots of torque.

Pro-Link rear suspension.

A little brother.
The all new CR60R.
A machine perfectly suited to young moto-crossers thanks to its 27.2 inch seat height and plenty of torquey, low and mid-range punch.
But the six-speed transmission really lets a kid wind out the 58 cc reed valve-inducted engine on those long straightaways.
And with 27 mm front forks and our exclusive Pro-Link rising-rate rear suspension, there's only one way to beat this little CR.
Get a bigger CR.

HONDA
FOLLOW THE LEADER



Exclusive CR80R Pro-Link rear suspension with adjustable spring preload and remote reservoir.

31 mm air-adjustable forks have refined spring and damping rates with 8.9 inches of travel.

New liquid-cooled engine produces over 20 horsepower.

Maintenance-free inner rotor CD ignition.

Exclusive Pro-Link rear suspension provides 8.3 inches of progressive travel.

PEOPLE WHO RIDE MOTOCROSS SHOULD GET PROFESSIONAL HELP.

You might be a little crazy, but if you're riding a Honda you're pretty smart.

You know what it takes to win.

Skill. Determination. And a machine designed with championship technology.

But it also takes parts. Quick service. Professional advice on fine tuning your machine. Maybe even a little financial assistance.

That's where the Honda CR Support Program comes in. Helping you make the most of your motorcycle and your season.

The reason is simple. Keeping you the leader is what keeps us the leader.

Ask your Honda dealer about the CR Support Program.

It just might be the best reason of all for getting a new Honda CR.

HONDA

FOLLOW THE LEADER

ALWAYS WEAR A HELMET AND EYE PROTECTION. Designed for operator use only. CRs are designed for motocross use only and are sold "AS IS" without warranty. Rules, guidelines and benefits of this program are subject to change without notice. Specifications and availability subject to change without notice. ©1982 American Honda Motor Co., Inc. For a free brochure, see your Honda dealer. Or write: American Honda, Dept. 355, Box 9000, Van Nuys, CA 91409.

MINITEST:

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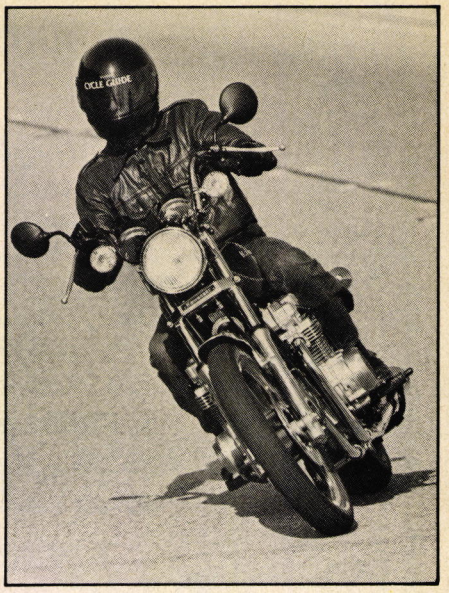


LTD handles well at moderate speeds

Better than at the extremes.

Kawasaki KZ750 LTD

Satisfaction guaranteed.

• If there were a class for the most elemental Universal Japanese Custom, the Kawasaki KZ750 LTD would be at its head. Because while other manufacturers pursue swoopier, more radical or more technically complex variations on the custom theme, Kawasaki, creator of the UJC, just keeps refining the formula with the LTD.

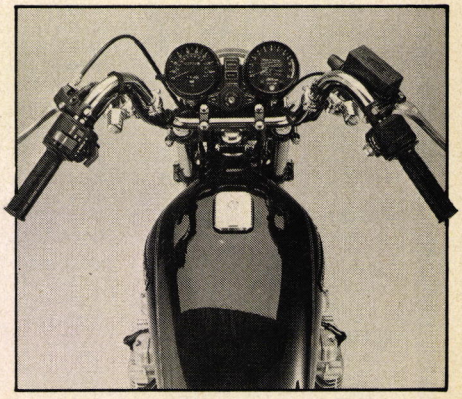
Central to that formula are a teardrop-shaped gas tank, stepped seat, pullback handlebar and 16-inch rear tire, and the LTD has them, to be sure. A transverse, inline four-cylinder engine also is integral to the UJC formula, and the Kawasaki has that, too. It's basically the same conventionally aspirated, eight-valve, DOHC engine that's been satisfying riders since its inception in 1980. And that satisfaction is derived from near-seamless carburetion and strong mid-range power. There's adequate power in the lower rpm ranges—say, below 4000 rpm—but it's past 4000 that the engine comes into its own. It has the kind of mid-range punch that makes a rider slow down so he can accelerate back up to speed, just to experience that fine rush. Passing cars at freeway speeds doesn't require downshifting; simply pick the moment, twist the throttle, and the engine will propel you past with a serene, almost vibration-free whoosh. As an added bonus, the LTD is quite tractable, too; you can let the revs drop to 1500 rpm in fifth gear, then just roll the throttle on, and the LTD will accelerate smoothly, with no lurching, coughing or bucking.

The suspension, however, is another matter; or more specifically, the rear suspension. The front fork goes about its job with quiet competence, insulating the rider from road-surface irregularities, regardless of the pressure inside the tubes (7.1-14 psi is the recommended range). Indeed, the fork's behavior is almost unnoticeable compared to the action of the rear shocks. It doesn't seem to matter what damping/spring preload combination the shocks are set on; unless the road is smooth, the ride is not. Even on full soft, the rear end transmits a series of jabs through the seat to the rider's tailbone. Different suspension settings (five each for damping and preload) will diminish the blows' intensity, but not get rid of them entirely.

The *real* culprit behind the LTD's lack of comfort, though, is the pullback handlebar, which places the rider's spine in line with the rear shocks; such a position tends to feed the bumps straight into his tailbone. And it's the handlebar, too, that compromises control of the LTD, at both extremes of speed, fast and slow. Even so, the LTD handles well; up to seven-tenths levels it's stable and, yes, fun to guide through corners. Plus, there's sufficient ground clearance to enable you to use up the tires' available traction.

Fortunately, while the handlebar is one of the LTD's most pivotal ergonomic elements, it's one of the most easily changed elements. It is also, however, a key to the custom-styling statement, and if you *must* have the look, you're going to pay. On the other hand, if diluting the look with a flatter, lower, more plain-vanilla bar is acceptable to you, then you can still enjoy the LTD's inherent goodness. It still will be a basic, elemental street-cruiser, and, best of all, it still will have that smooth, powerful 750 engine that will give you satisfaction, guaranteed.

—Charles Everitt



Control layout is simple, traditional

No gadgets here; just the necessities.

KAWASAKI KZ750 LTD

Importer: Kawasaki Motors Corp.
2001 East Edinger Avenue
Santa Ana, California 92711

Category	street
Suggested retail price	$3099
Engine type	four-stroke transverse vertical four
Valve arrangement	double overhead camshafts
Bore and stroke	66.0mm x 54.0mm
Displacement	739.0cc
Compression ratio	9.0:1
Carburetion	four 34mm Keihin constant-vacuum
Gearbox	5-speed
Front fork/wheel travel	Kayaba air-spring, 36mm stanchion tube diameter/5.9 in. (151mm)
Rear shocks/wheel travel	dual Kayaba shocks, 5-way adjustable spring preload, 5-way adjustable rebound damping/ 4.0 in. (101mm)
Wheelbase	56.8 to 58.1 in. (1443 to 1478mm)
Seat height	30.8 in. (783mm)
Weight	474 lbs. (215kg)
Best 1/4-mile acceleration	12.564 sec., 105.38 mph (170 km/h)
Top speed (calculated at redline)	131 mph (211 km/h)
Stopping distance from 60 mph	131 ft. (40m)
Fuel consumption	41 to 55 mpg (17 to 23 km/l)
Warranty	6 months unlimited mileage
Available color	ebony only

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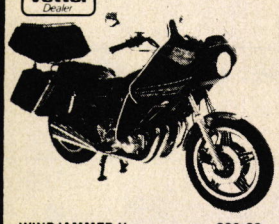

WINDJAMMER V 386.00
Available in Blk., Wht., Silver or Color Matched. Price includes windshield & all mounts. Other options available.

LOWERS $83.95

WINDSTAR $288.00
All new for '82. Aero-dynamic design. Available in Blk., Wht., Silver or Color Matched. Price includes windshield & all mounts. Other options available.

QUICKSILVER $196.00
The original lightweight. Shipped complete with windshield and all mounts. Options available. Black, White, Silver.

ROOSTER $119.00

SADDLEBAGS $288.00
These detachable bags are available in Blk., Wht., Silver or Color Matched, and include all necessary mounting hardware and luggage rack.

TAILTRUNK ..... :$181.00
Works with Vetter or other racks and is available in Blk., Wht., Silver or Color Matched. All hardware included.

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VETTER SOUND $63.00
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VETTERLITE HELMET $88.00
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GHOST, Rd. or Sq. $104.00

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350H x 19	$48.95
Tubeless	Add $5.00

K112 Rear

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400 x 18	$54.95
425 x 18	$56.95
510 x 18	$57.95
Tubeless	Add $5.00

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K291T

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510 x 17	$66.88
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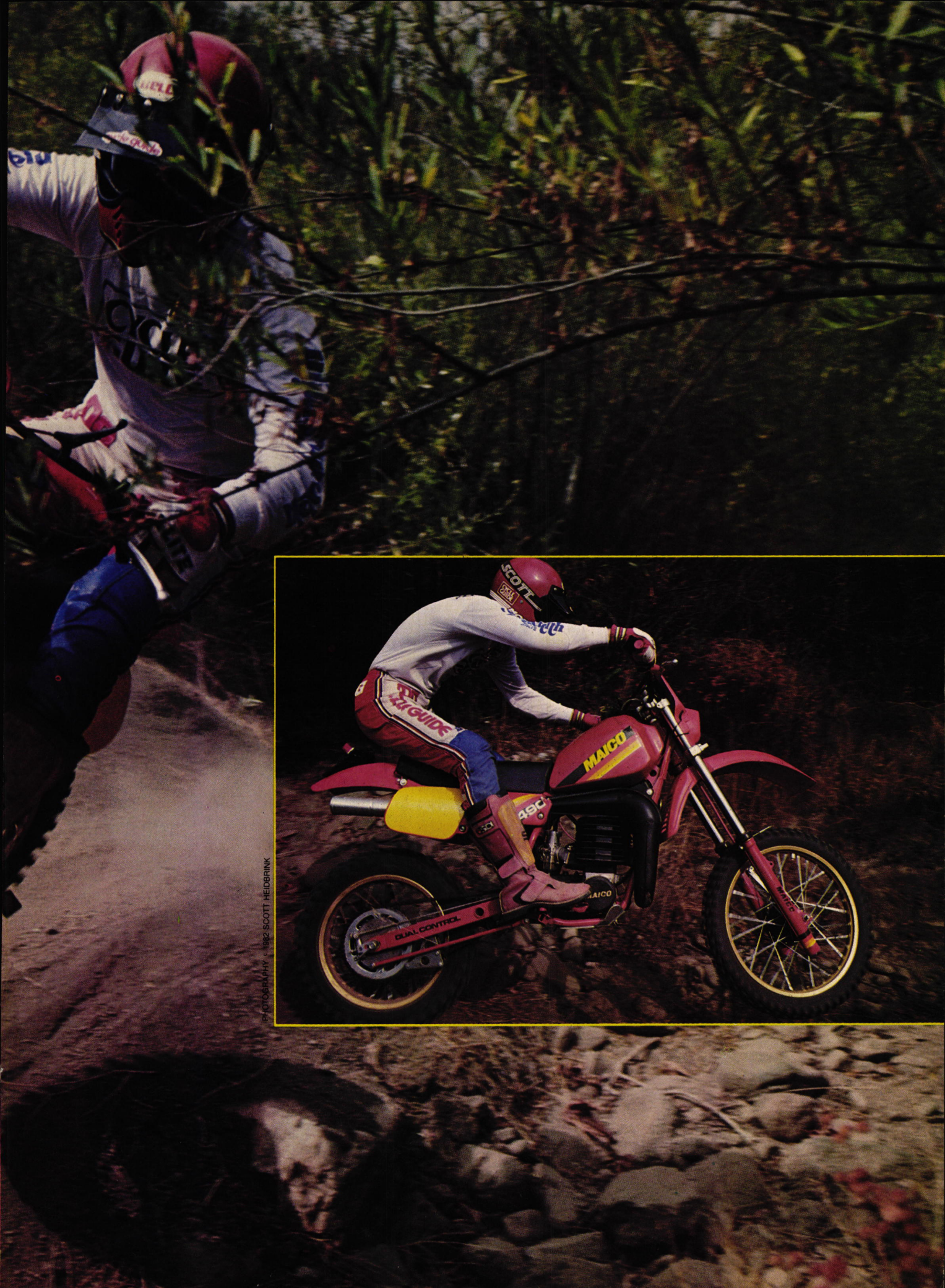
ENDURO TEST:

Maico 490 Enduro

Open-class success through excess.

BY RON LAWSON



PHOTOGRAPHY © 1982 SCOTT HEIDBRINK

The Maico 490 E is more than just an experiment in excess. It's a 489cc monument to the concept that there is no such thing as too much, as long as too much is properly executed. The '83 Maico has arrived, looking for all the world like the enduro rider's answer to the big-inch trend in Open-class motocross, ready to blow anything in its class into tiny enduro-bike fragments. But this motorcycle is about to make a surprising discovery: There are no other machines in its class.

Not that there aren't any other high-horsepower Open-class enduro bikes; it's just hard to throw the Maico into that category. It has so much of everything, from power to suspension to weight, it has placed itself in a realm no other machine has yet entered. And don't get the idea that the 490 is just a re-aimed motocrosser, either; it has an identity all its own, even though it does share many parts with last year's 490 motocrosser.

Fundamentally, though, it's power that sets the Maico apart from other big-bore enduro bikes and Open motocrossers. As soon as you twist the Maico's right grip you know that this is what Open-class enduro power should have been long ago. There are some things you can't have too much of, and one is manageable horsepower. There's no way you're ever going to find a situation where the 490 runs out of horses, and no way that the Maico's delivery of those horses will get you into trouble.

If you can imagine a four-stroke that revs, that's how this two-stroke Maico performs. You can lug it down to idle-rpm ranges without stalling or even falling off the bottom of the powerband. And if you stay in that low-rpm zone, you'll start thinking about entering a trials event rather than an enduro. But just open the throttle a hair more and the Maico makes a clear statement that this is a machine made for going very fast. Torquey motors aren't supposed to rev quickly, but the Maico's does; and that, combined with its formidable horsepower, makes for a powerband that is no less than ideal for enduros.

That the power is so manageable is a tribute to Maico's ability to do more with less. The engine is almost identical to that in last year's Alpha One 490 motocrosser, the only difference within the barrel being the incorporation of the six-petal reed block used on last year's 250. The reed will hardly be a surprise to anyone who remembers that last year's 490 already had a non-functional boost port that simply went through the liner and dead-ended at the barrel casting. That boost port is put to use this year and now leads into the intake tract. The transfer and exhaust ports are identical to the '82 motocrosser's, as is the pipe; but by adding the reed and switching from a Motoplat internal-rotor ignition to a Bosch unit with an external flywheel, Maico was able to change the fire-breathing MX motor into an equally fire-breathing, but much more manageable, enduro powerplant.

Trials torque, motocross suspension and desert stability make the 490 a hybrid racer

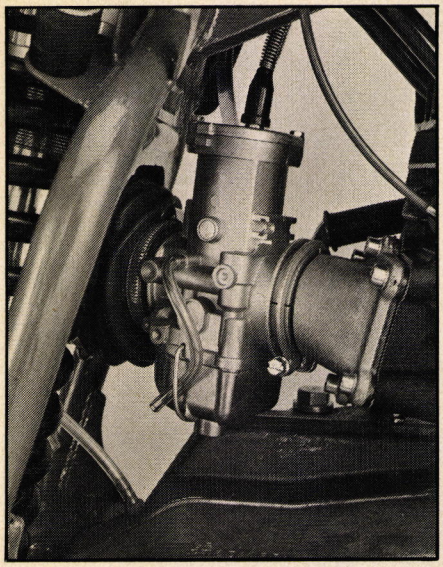
But in what kind of race do you enter it?

And if having a motor that produces more torque, more power and more *everything* than any enduro bike made isn't enough to qualify the Maico as the most excessive thing on knobs, then the chassis, and more specifically, the suspension, will surely push it over the line. Maico started by using the rear-suspension linkage from the '82 Alpha Control single-shocker and renamed it Dual Control because of the two simple aluminum links it uses to obtain its rising rate. But last year's model was plagued with shock trouble. If the stock Corte Cosso didn't break a shaft in the course of a season of racing, then the damping would gradually fade away.

Rather than attempting to correct the Corte Cosso problems, Maico chose to equip all of its '83 models with Ohlins damping-adjustable shocks. The Ohlins fitted to the enduro model, though, is one-eighth-inch longer than last year's shock. That might not sound like much, but it increases the rear suspension travel and seat height by almost an inch. And because the rear end now sits higher, the machine's steering angle has decreased one degree to 27.5.

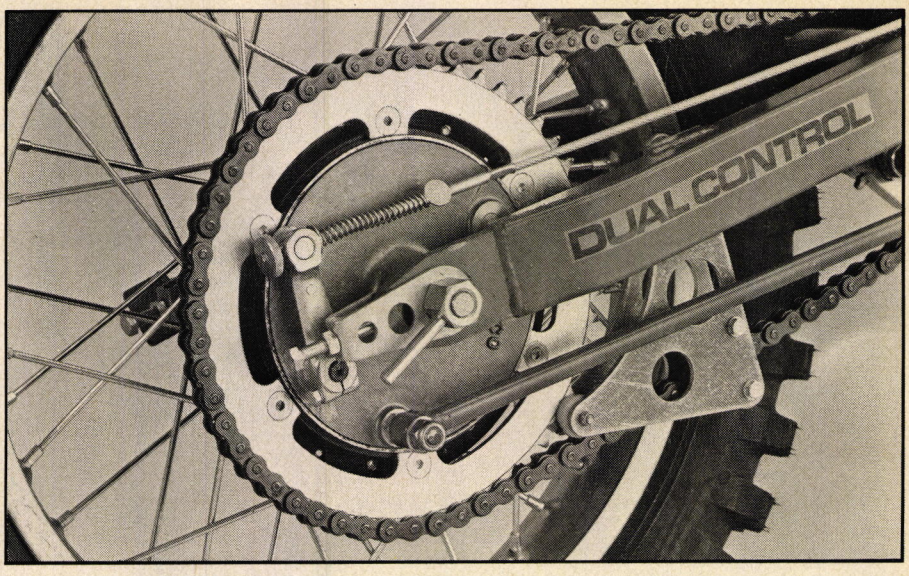
The front of the Maico also received a slight lift, though not as much as the rear. The fork has roughly a quarter-inch more travel, bringing it to just under 12 inches. Maico did this by using one top-out spring per leg instead of two. And to make the fork more responsive on low- and medium-speed bumps, Maico has decreased the fork's compression damping with two additional orifices in each damping rod. The fork also now uses progressively wound fork springs.

That suspension rethink has resulted in a remarkably plush ride. The Maico smooths out ruts and rocks and tree roots with what seems like an endless amount of



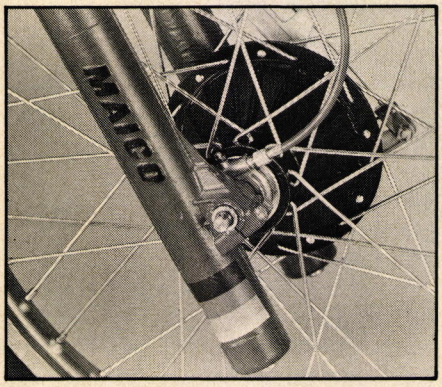
A 40mm Bing feeds the new reed valve

A 6-petal loan from a younger brother.



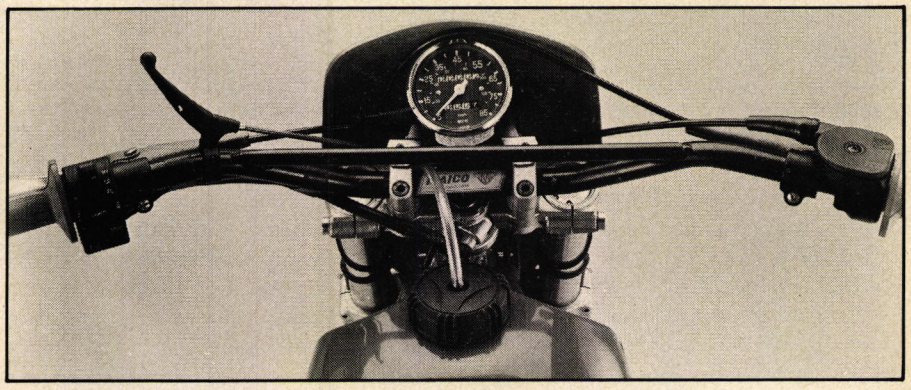
Maico brakes and swingarm are borrowed from last year's machinery

But expect a quick-disconnect wheel as a mid-year change.



Tripmeter cable lives in harm's way

It's hard to win an endless enduro.



An 85-mph VDO speedometer/tripmeter keeps the Maico in its minute

But don't believe what you read; the machine tops out at 86.

PHOTOGRAPHY © 1982 VIC HUBER

travel. And by enduro standards, the Maico's suspension does seem almost bottomless. Not only is there more travel at both ends than on any enduro bike CYCLE GUIDE has tested, but there is more than on most motocross bikes. But this is no motocrosser. The 490E has the sheer travel to qualify as one, but it's softer and smoother than anything you'll find on a motocross track. When you make a both-wheels-at-once landing from a peaked ledge, there's no jolt; you simply sink into the suspension as if you had landed in a bottomless tub of whipped cream. The Ohlins shock has 12 rebound-damping positions, but regardless of the type of terrain we encountered during our testing, the sixth-slowest setting seemed best. When dialed-in, the Maico never kicks or hops. And you never seem to run out of travel, because when the Ohlins does bottom, it does so gently.

There's a reason, however, why most enduro machines don't have that much travel: Tight-woods maneuverability is important. The Maico is a tall motorcycle. In fact, with a seat-height of 38.7 inches, the 490 collects yet another, although somewhat dubious, CYCLE GUIDE distinction—it's the tallest enduro bike, and the second tallest bike of *any* sort, we've ever tested. The Honda CR480 motocrosser, at 39.0 inches, had only a slightly greater stature. And on tight trails, the Maico's seat-height number translates into clumsiness. It's difficult to use the machine's greatest asset—its low-speed torque—when the rider is afraid to go slow. In first-gear woods sections, or any tight situation where the rider loses the security of higher speed, the Maico becomes awkward. It's not quite like being perched atop a flagpole in a windstorm, but even our six-foot-plus test riders were often intimidated by the Maico's height.

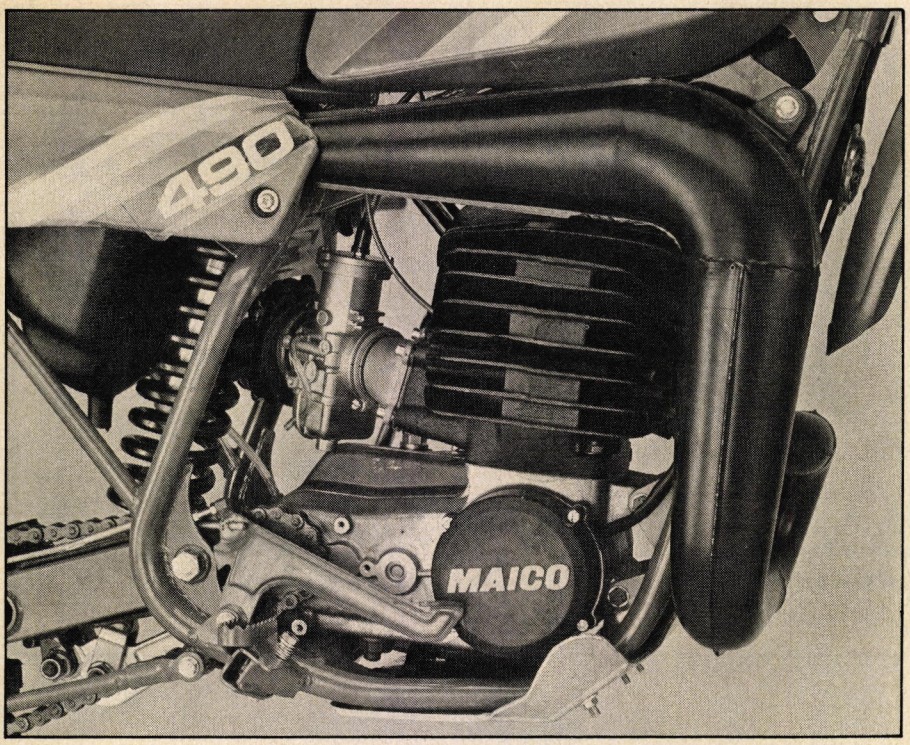
That long, soft suspension has other drawbacks, as well. If you drop into a sand bed and try to make an immediate turn on the Maico, the fork compresses all too easily and the weight shift causes the rear suspension to unload. So by the time you're ready to actually turn, the chassis geometry has changed radically and the bike handles nothing like it did a few seconds before. So you have to be ready to compensate quickly as the front end tries to knife under in the sand.

Maico currently is working on several modifications that might remedy this situation. A mid-year steering-angle change is planned that will return the Maico's rake to the 28.5-degree angle it had before the increase in shock length. That won't make the machine any lower, but it could make its height easier to live with.

Maico also is playing with the idea of marketing a travel-limiting kit. This year, the FIM has passed a rule limiting ISDE bikes to 250mm (9.8 inches) of travel, so in order to be legal—and to make the machine more competitive in tight situations—the 490 will have to shrink a couple of inches at both ends. The kit still is in the planning stages, but it would consist of a spacer for the Ohlins shock, plus shorter fork tubes and damper rods.

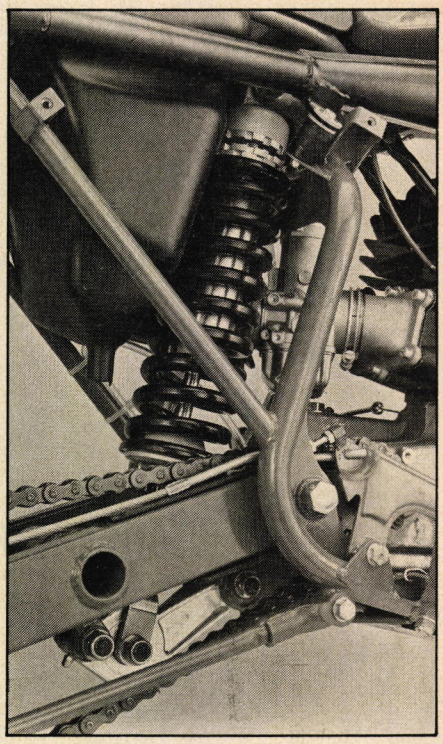
But one situation for which all 38 inches of the Maico's present height are perfectly suited is desert racing, or for that matter,

Continued



A reed, a different tranny and a new ignition change the motor from MX to enduro

And give the 490 E a powerband that is worlds different and miles wide.



An Ohlins replaces the '82 Corte & Cosso

And Dual replaces Alpha Control.

any kind of high-speed competition. In fact, it would be hard to find a machine better-suited for dodging cactuses and pucker bushes at 86 mph. The Maico's height is an advantage there because it serves to de-emphasize speed. It's the opposite of the feeling you get from driving a go-kart; 20 mph feels like 80 when you're only inches above the ground, but 80 seems like no big deal when you're on the high-altitude Maico.

That might be just an illusion, but it's backed by real-world handling stability. The 490 has the same secure feeling that has marked Maicos for years. It has what seems like a too-good-to-be-true combination of steadiness and manageability. When you want to go straight, the Maico goes perfectly straight, with its suspension allowing you to go over what other bikes run into. And when you want to turn, the Maico changes direction with no problems. But as with the motocross model, you have to plan your moves well in advance, for the Maico doesn't like snap judgments. It is, after all, 262 pounds of enduro motorcycle, but it's stable and well balanced enough that you'll rarely notice that weight. You probably won't even believe the weight number until you decide to force a sudden 90-degree turn. The Maico's response to such a move is straightforward enough—it's going to overshoot the turn. But if you give the bike fair warning in the form of a little weight shift, a lean, or maybe some early braking, you'll go through the turn so easily you'll think you must be doing something wrong.

One reason for the 490's reluctance to make sudden turns can be found at each end of the bike: weak brakes. The front binder has enough power to drag you to a stop in fairly short order, but the rear requires enough pressure to turn your toenails white before you start to slow. Both brakes do, however, retain their stopping power—unimpressive as it is—when it come to wet-weather riding.

Water might not be so merciful, though, with the lighting system. Our test bike was an early production model, and the wiring was a jumble of mismatched wires and poor connections. All of that likely will be corrected in later units, but the handlebar-mounted switch that coordinates all the Maico's electrical activities is just as flimsy and prone to DNFing. That switch includes the kill button, too, so a simple right-side slide-out resulting in a stuck throttle could mean a not-so-simple top- and/or bottom-end rebuild.

That switch also links into a component not found on Japanese enduro bikes: a horn, which isn't loud, but it's there. And another unusual aspect of the Maico is that its Italian-built headlight/front number plate and taillight, and its American-made

COMPARATIVE TEST DATA:

Make & Model	Wheel Travel Front/Rear, in.	Weight (fuel tank empty), lb.	Weight bias Front/ Rear, percent	Steering head angle/ Trail, degrees/inches	Transmission, number of speeds
Maico 490 E–'83	11.9/12.6	261	46.4/53.6	27.5/4.6	5
Honda XR500–'82	9.5/10.0	289	44.3/55.7	28.0/4.4	5
Yamaha IT465–'81	10.0/11.4	247	46.0/54.0	28.5/4.8	5
Husky 250 WR–'82	10.6/10.7	236	45.0/55.0	30.0/6.0	6
Maico 490 Alpha 1–'82	11.6/11.5	248	47.2/52.8	28.5/5.0	5
Yamaha IT250–'82	9.5/11.8	239	45.6/54.4	29.0/5.0	6

© 1982 SCOTT HEIDBRINK

The 490 Enduro shows its motocross bloodline even in the backwoods hills

And with nearly 13 inches of travel, the E can out-plush anything on the trail.

Charting the Changes

Engine:: Maico's 490E motor now is fed through a six-fiber-petal reed valve, like that used on last year's 250. A 40mm Bing carburetor still is used, but it has been completely rejetted for use with the reed.

Suspension: An Ohlins shock replaces last year's Corte Cosso. The Ohlins has a larger, stronger shaft and is 1/8-inch longer than the '82 shock. The rear suspension system has been renamed Dual Control.

The front fork uses no preload spacer this year, and the springs have been changed from straight-rate to the progressively wound type. Instead of using two top-out springs, each leg now has only one, resulting in a quarter-inch more travel. The damping rods also have been modified to incorporate two additional compression-damping passages (each 4mm in diameter), and the rebound-damping passage has been moved 10mm lower on the rod to give added resistance to topping-out.

Chassis: The increase in shock length changed the steering angle from 28.5 to 27.5 degrees and the trail from 4.96 to 4.60 inches. A mid-1983 change will, however, return the steering geometry to its 1982 specifications. Also coming later in the year will be a quick-change rear wheel, but the early models will have a wheel identical to last year's. Maico claims that the spokes and rims are stronger than last year's, and that the spokes are no longer chrome-plated but have a polished finish.

Details: The Maico has a new headlight/front number-plate combo and taillight made by Acerbis of Italy. The gas tank is American-made and has a four-gallon capacity.

gas tank, skidplate and Answer Products spark arrestor/silencer, all are bolted on after the bike arrives in this country. And the speedometer is a genuine VDO enduro unit that will withstand a lot of abuse. Its cable flops around out in front of the right fork leg, though, and is highly vulnerable as a result. Consequently, on our first ride, a passing bush ripped the cable out of its housing. And that's a bigger problem than it might seem, since it's almost impossible to keep time in an enduro without a trip-meter.

And, after all, the Maico is an enduro bike, even if it doesn't fit into the traditional enduro-bike mold. Actually, it doesn't fit well into *any* mold. It has more torque than you need in the desert, more travel than is allowed for an ISDE, and it's more motorcycle than a trail rider can use. But too much performance is no crime. When properly set-up with whatever amount of suspension travel, the Maico can perform in any one of these settings better than any of the assortment of other Open enduro bikes. What's more, it can do *all* of these things better than any other Open-classer. And when a machine can do that, it doesn't need to conform to the generally held rules on what a bike in its class should be.

It can just be in a class of its own. ●

Ride Review

• When human skyscrapers Dean and Lawson returned from Day One on the Maico complaining of the E's excessive seat height for enduro riding, it could have been a prelude to disaster. When a man-mountain gets nosebleeds from the altitude, what can a mere mortal hope for?

They were wrong, of course. Oh, the Maico *is* tall, but it was only in tight, gnarly sections that it was a problem. The rest of the time, the seat height's cause paid off handsomely: long-travel suspension. The E has so much good suspension that, if you're a mind to, you can sit your way through logs on the trail, sudden drop-offs and omigod rocky sections. And the chance to sit down when you want to can leave you at the end of a riding day contemplating another loop. Surprise one.

Surprise two was that I didn't realize Maico had an Automatic. Sure, I know that there's a clutch, gearshifter and a full assortment of cogs. But other than running the E through the gears to prove that they were there, the 490 might as well have arrived with Maicoflow. Except for wide-open sections, the monster engine stayed mostly in third, merrily pulling its way over everything—hills, mountains and vertical climbs be damned. So figure the 490E however you want to. *I* know what it's for. It's the perfect lazy man's enduro bike. *—Larry Works*

• I thought I had died and gone to heaven. God knows, the Maico's towering seat certainly is high enough to get me a lot closer to the Pearly Gates, but that wasn't the source of my ecstasy. Nope, I was reveling in the 490 E's utterly unbelievable motor, in my mind the most perfect enduro powerplant ever devised.

You see, for years now I've envisioned how I would build the ultimate enduro engine if I were able. It would be one that could cut loose with staggering acceleration just like an Open-class motocrosser, yet could lug down like a Kenworth in compound low, never *ever* refusing to speed up, no matter what. And wheelspin? Ha!—a thing of the past with my dream motor, for it would be tractable beyond belief, always able to hook up with the ground regardless of how snotty the trail or how indiscriminate my manipulation of the throttle.

Well, I need dream no more; that very motor is here, and it behaves *exactly* like the one I had imagined. Right now it's being carried around in a chassis that seems better-suited to slamming berms and causing nosebleeds than it is to dodging trees. But I could care less about that. Because as long as that magical motor is in it, the rest of the 490 E is virtually unstoppable. *—Paul Dean*

CYCLE GUIDE SPECIFICATIONS

Maico 490 E enduro

IMPORTER: Maico West, 110 East Santa Anita Avenue, Burbank, California 91502

SUGGESTED RETAIL PRICE: $2800 (approx.)

ENGINE

Type ..... two-stroke vertical single
Port arrangement ..... one reed-valve-controlled intake, four main transfers, one booster transfer, one exhaust
Bore and stroke ..... 86.5mm x 83.0mm
Displacement 487.8cc
Compression ratio (uncorrected) 12.0:1
Carburetion ..... one 40mm Bing slide/needle
Air filter ..... washable oiled foam element
Lubrication ..... pre-mixed fuel and oil
Starting system ..... primary kick
Ignition ..... magneto-flywheel CDI
Charging system ..... none: direct AC lighting

DRIVETRAIN

Primary drive ..... dual single-row chains; 1.857:1 ratio
Clutch ..... wet, multi-plate
Final drive ..... #520 chain (5/8-in. pitch, 1/4-in. width); 3.714:1 (52/14) ratio

Gear	Internal gear ratio	Overall gear ratio	MPH per 1000 RPM
I	2.985	20.592	3.7
II	2.175	15.003	5.0
III	1.655	11.415	6.6
IV	1.255	8.656	8.7
V	1.000	6.898	11.0

SUSPENSION/WHEEL TRAVEL

Front ..... Maico air-spring, 41.5mm stanchion tube diameter/11.9 in. (301mm)
Rear ..... single Ohlins shock, 10mm spring preload adjustment, 12-position rebound-damping adjustment/12.6 in. (319mm)

BRAKES

Front ..... drum, single-leading shoe
Rear ..... drum, single-leading shoe, straight-pull-cable operated

TIRES

Front ..... 3.00-21 Metzeler Moto Cross
Rear ..... 4.50-18 Metzeler Moto Cross

DIMENSIONS AND CAPACITIES

Weight ..... 261 lbs. (118kg)
Weight distribution ..... 46.4% front, 53.6% rear
Wheelbase ..... 58.8 to 60.1 in. (1494 to 1526mm)
Seat height ..... 38.7 in. (985mm)
Handlebar width ..... 33.5 in. (852mm)
Footpeg height ..... 17.2 in. (438mm)
Ground clearance ..... 14.0 in. (355mm), at skidplate
Steering head angle ..... 27.5 degrees from vertical
Front wheel trail ..... 4.60 in. (117mm)
Frame .... tubular chromoly steel, double front downtubes
Fuel tank ..... plastic, 4.0 gal. (15.0*l*), including 0.7 gal. (2.7*l*) reserve
Instrumentation ..... speedometer, odometer, tripmeter resettable in tenths

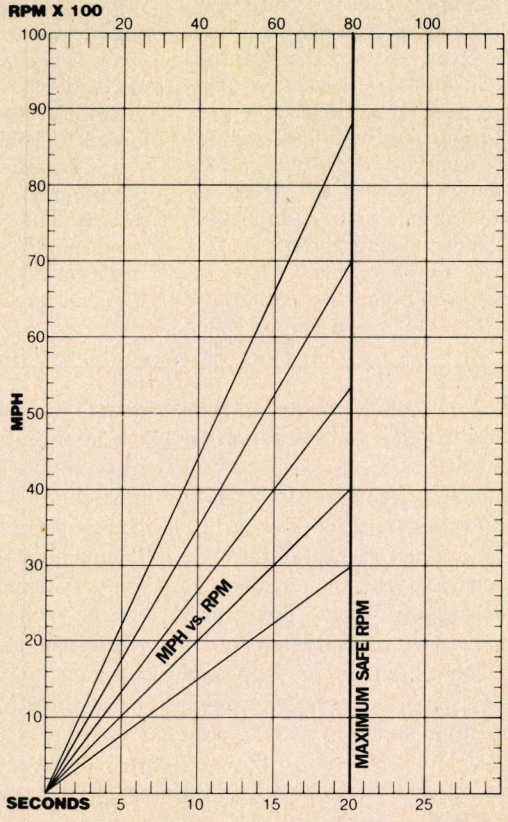
PERFORMANCE

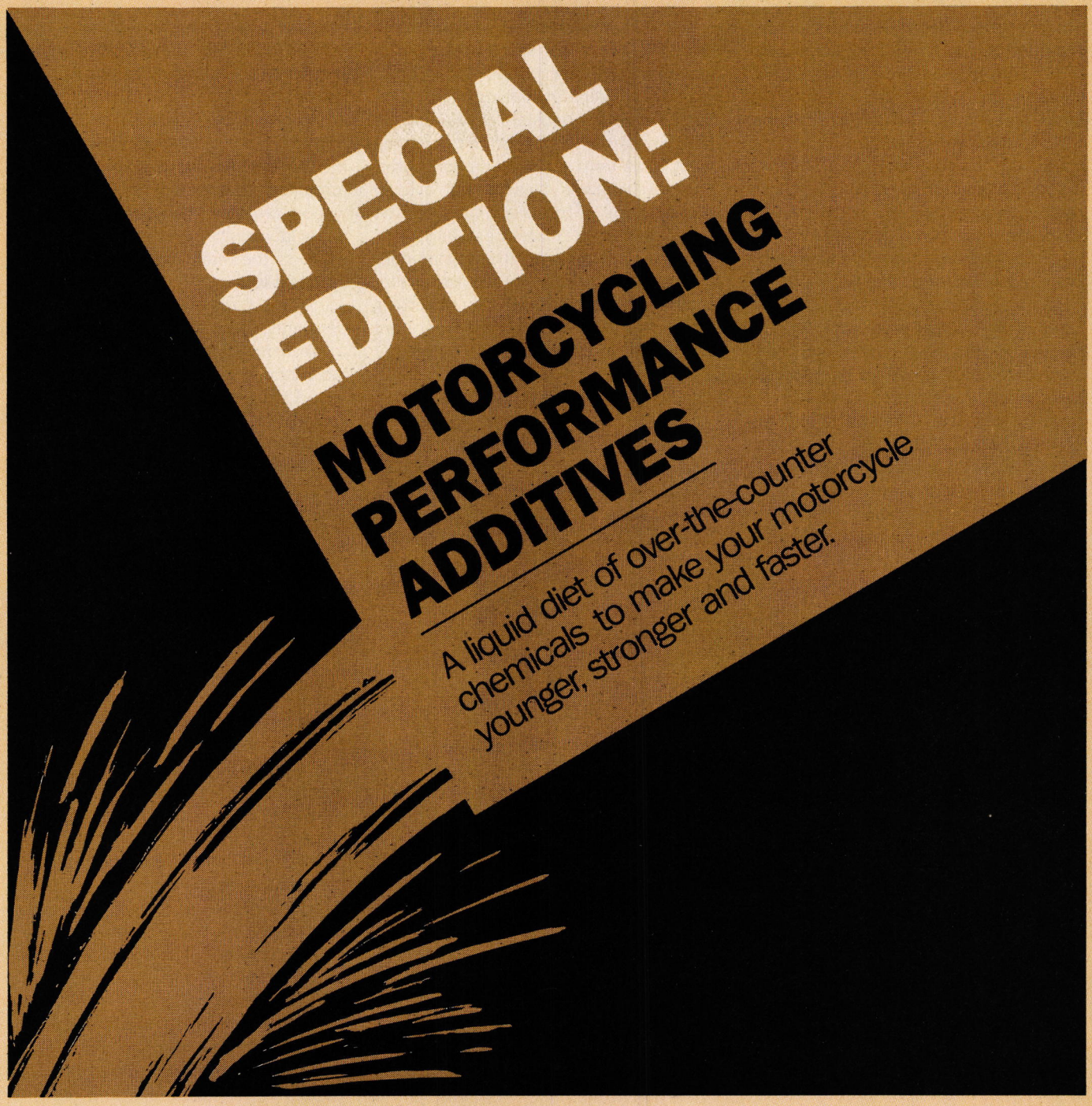
Top speed (observed) ..... 86 mph (138 km/h)

WARRANTY: none

AVAILABLE COLOR: red only

All weights and measurements are taken with machine unladen and fuel tank empty




SPECIAL EDITION:
MOTORCYCLING PERFORMANCE ADDITIVES
A liquid diet of over-the-counter chemicals to make your motorcycle younger, stronger and faster.

Lubricants and Additives are among motorcycling's common denominators, because, to varying degrees, we all use them. And use them up. And then we have to buy more. There's a veritable kaleidoscope of oozy stuff to be used, too. To be sprayed on, brushed on, poured in, measured out and mixed together. Some of it makes parts slide better, some makes them stick better; some of it removes dirt, some catches dirt. It's all designed to make your motorcycle go faster, use less fuel, ride smoother, work easier, last longer and run better. Motorcycle dealers' shelves are stocked with cans, bottles, tubs of it.

In some cases, certain chemicals aren't there to enhance performance; they're absolutely necessary for your motorcycle to run. In other cases, these products aren't essential, but can make living with your motorcycle easier. In still other cases, these lubricants might not be strictly necessary for the bike to run but are imperative for it to run well for very long. And some of them can be important only for certain bike/rider situations. But in no case will *anything* that you can pour into your motorcycle take the place of needed maintenance.

Readily admitting that there is a bewildering array of chemical performance additives for your bike, we at CYCLE GUIDE have assembled this Buyers' Guide of Lubricants and Additives to help guide you through the swampy ooze of all that stuff in cans and bottles and tubs, as it were.

Of necessity, we've narrowed the list. First, there is nothing here to make your

Continued

motorcycle *look* better. Second, the things you normally put in a motorcycle anyway—motor oils, wheel-bearing greases, two-stroke premixes, coolants, shaft-drive gear lubes, brake fluids—are not here because we consider them fundamental; they came with the bike when you bought it, and it won't run without them. Third, we're not concerned about racing fuels; we assume you pour pump gasoline into your bike's tank. We do, however, include appropriate additives for oil and fuel.

The features or advantages of many kinds of aftermarket products are readily discernible; it's easy enough to find out if a piece of touring luggage will hold your full-face helmet, for example. Others can be tested or checked; if a tire wears out more quickly than expected, you can at least avoid that brand next time around. But lubricants and additives are tougher to figure, because only a chemist might know exactly what's in the can and understand what that particular molecular makeup will do to your motorcycle. In most cases it is impossible for the individual to know if that can of stuff he carefully poured into the crankcase really prolonged the bearing life of his well-tuned hyperbike.

That doesn't mean you have to blindly accept the additive manufacturer's claims in every case, though. If you were very careful you *might* be able to determine the relative value of some additives. Astute observation of coolant or cylinder-head temperatures, under identical weather and load conditions, could indicate the effectiveness of an oil additive in improving lubricity and therefore reducing friction and heat buildup. Maybe. Being entirely objective might allow you to compare various shock oils for ride quality, if you could be objective about ride quality in the first place. Maybe.

But in most instances, you're left to depend upon what it says on the can, bottle or tub. You might benefit from trying a few things before settling on *the* one for your bike, however. And you probably can find some information from other riders who have used similar equipment in similar circumstances—but maybe not much *good* information, because popular opinion on additives includes lots of personal prejudice, traditional favorites, and the all-too-typical practice of recommending whatever the fast guys use. Look for specific information and avoid prejudicial testimonials.

Now, just to confuse everyone: It is highly unlikely that every product on those shelves can do your bike any good. Yet it is also a certainty that some of them can, when carefully selected and applied.

Under the general heading of fuel additives and octane boosters we have all the stuff you pour into the fuel tank, excepting what flows from a service station pump. For those who live in less favorable riding climes some of these additives can be quite helpful. Stabilizers are beneficial whenever a motorcycle is to be stored for long periods. By reducing the fuel's evaporation rate and its affinity for absorbing moisture from the air, they help prevent gasoline from gumming in the carburetor and fuel system, and also inhibit rust formation on the inside of the tank.

Octane boosters are designed to allow a higher-compression engine to operate without pre-ignition on lower-octane gasoline. They can be invaluable for modified motorcycles, as well as for some older bikes designed for higher-octane fuels, or in winter when gasoline often is treated with compounds that enhance its cold-start effectiveness but lower its octane rating. If your engine will run properly on a lower-octane fuel, though, a higher-octane one will *not* increase power or mileage, no matter what anyone tells you.

With fewer service stations offering leaded gasoline, some motorcycles *might* benefit from the addition of lead for valve lubrication; some manufacturers, though, recommend unleaded gasoline. Usually, lead is specified for "off-road" use, and might help in a race engine. So might nitro. But if you have to ask what it's for, you probably don't need it; and if you use it, you certainly don't have to ask.

Next are the various oil additives. Basically, they are designed to improve the lubricity of engine and/or transmission oils. By doing so, they reduce friction and operating temperatures, and therefore increase engine longevity. These are the usual claims, at least. Some, like viscosity improvers, can make engine oil thicker and yet slicker, too. Some additives have the ability to "stick" on parts and not run back down into the sump as readily, so when the engine's started, there is lubrication available from the first push of the starter button. All these qualities can be beneficial, but you should remember that some of these products might have been compounded originally for use in applications where the engine is lubricated separately from the transmission, while in most four-stroke bikes the two areas share lubricant. Make sure what helps one won't hurt the other.

Another familiar category is chain lubes. Practically anyone who has ridden a bike knows about chain lubes. But life is more complicated now, with lubes for plain or O-ring chains, for touring or racing, for pavement or dirt. An O-ring chain lube will be formulated to work with neoprene O-rings without breaking them down. A touring or street lube might have properties to make it stick to the chain and not fly off; for racing this is less important than the ability to withstand extremely high loads and temperatures. Chain lubes for dirtbikes have to live in mud. The result of this specialized lubrication technology is that, properly selected, today's chain lubes will better serve you and your chain.

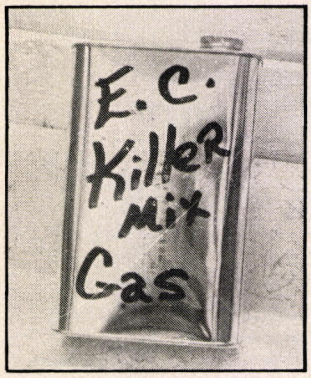
Cable lubes also are specialized, and are a relatively new segment of the industry. Cables need to work smoothly and easily without gumming and without giving you a stiff clutch or sticking throttle. Some of these products come with fittings that allow you to squirt lube into the cable assembly under pressure—a far cry from waiting for sewing machine oil to dribble down a clutch cable's length.

Suspension oils are used by most riders, but perhaps not always optimally. By varying the weight of shock oil or fork oil, you can alter damping and, therefore, ride and handling. But this requires some experience; you've got to be in tune with your bike to make the correct choice. In some cases, with rebuildable shocks, oil is changed regularly. If possible, it might be better to alter the damping within the shock itself, then use the lightest oil for the most consistent performance, since heavy oils thicken in cold weather and can make the damping too stiff. The key here is experience.

The last category of performance additives includes the filter oils and cleaners. Filter oils are formulated to trap dirt in fabric or foam air cleaners. And the filter cleaners are used to clean off the old oil and accumulated dirt before re-treating the filter with fresh oil to ward off the next round of dirt.

Now that you know what all this oozy stuff is for, and how it might help you and your bike, the next step is yours. We—through this Buyers' Guide—have done what we can. Consider your motorcycling needs, ask around, read the labels and use your own judgment. Somewhere among all those cans and bottles there's something that will make owning a motorcycle just a little bit easier. ●

FUEL ADDITIVES & OCTANE BOOSTERS



E.C. Birt Killer Mix
A fuel additive designed to increase performance in all two-stroke engines.
Price: $32–32 oz.

Klotz Octane Booster
One ounce per gallon increases octane level 2½ points. Designed for all internal-combustion engines.
Price: $5.34–16 oz.

Maxima Hi-Test
Designed to boost octane, reduce pinging and knocking, and to increase overall performance.
Price: $4.89–16 oz.

Octane Boost 104+
An octane booster fuel additive designed to improve engine performance, reduce detonation and clean carburetors.
Price: $6.50–12 oz., (Super Strength) $9.00–16 oz.

Klotz Nitro Racing Additive
Designed to add power to both two- and four-stroke engines. Mixes with gasoline or alcohol.
Price: $5.83–16 oz.

Lubri-Tech Gas Up
A fuel treatment designed to boost octane, stabilize fuel for storage and to clean carburetors, valves and plugs.
Price: $4.95–16 oz.

Performance Lab Blend 7
Designed to boost octane level, help eliminate knock, and to increase power while cleaning carburetor.
Price: $6.75–12 oz.

Performance Lab Nitro Power
A "super additive" formulated to increase power output by as much as 5 percent. For use in racing and standard fuels.
Price: $3.50–6 oz.

Performance Lab Gasoline Storage Stabilizer
Formulated to protect gasoline from deterioration, and to prevent rust due to water condensation for three months or more.
Price: $5.95–16 oz.

Performance Lab Blend 9
Similar in design to Blend 7, but intended for use where still higher levels of performance are desired.
Price: $11.25–32 oz.

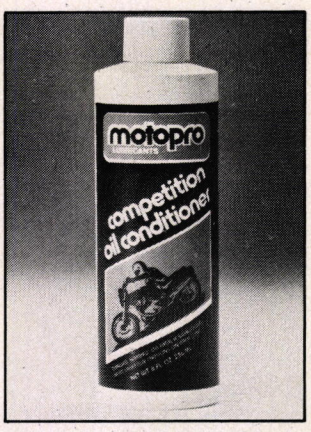
Performance Lab Fuel Lead
Designed to provide added lubrication to engine parts when added to low-lead gasolines. For 2- and 4-stroke off-road use only.
Price: $9.95–16 oz.

Performance Lab Combustion Chamber Decarbonizer
A cleaning agent formulated to remove carbon deposits and varnish from internal engine parts, while also reducing pre-ignition and detonation.
Price: $4.95–14 oz.

Klotz Gold Formula 2- and 4-Cycle Power Additive
Formulated with Klotz Green Formula racing castor to improve throttle response and increase octane.
Price: $3.55–16 oz.

Manley Power Plus
An octane booster with additives to reduce detonation and pre-ignition, and to maximize fuel burn-rate for a performance increase.
Price: $2.50–6 oz.

PJ1 Octane Plus/Competition
A fuel energizer formulated to boost octane rating, reduce knock and ping, and stabilize fuel for storage.
Price: $4.48–12 oz.



Motopro Competition Oil Conditioner
A concentrated engine and transmission oil additive compounded with anti-friction modifying agents developed to help reduce heat and wear, and to promote smoother shifting.
Price: $7.95–8 oz.

Big Red Super Chain Lubricant
Designed to offer chain protection under severe conditions.
Price: $3.35–16 oz.

Kal-Gard Chain Kote
Contains a high concentration of molybdenum disulfide for extending chain life by preventing metal-to-metal contact. A high-viscosity bonding agent is designed to keep the lube on the chain for extended periods.
Price: $4.50–17 oz.

ENGINE & TRANSMISSION OIL ADDITIVES

BG Extreme Pressure Concentrate
Designed to prolong bearing and gear life by providing increased lubrication and by sealing microscopic metal roughness. Intended for use in both engine and transmission oils.

Kal-Gard Engine Gard
A molybdenum disulfide-based engine and transmission oil additive designed to reduce friction and extend the lifespan of all treated components.
No manufacturer's suggested retail price.

CHAIN LUBES

BG Chain Lubricant
A molybdenum disulfide-based lubricant designed for use on both street- and dirt-bike roller chains.
No manufacturer's suggested retail price

Bel-Ray Maximum Strength Chain Lube
Engineered with a "Molyphos" additive to add lubrication and to extend life of all drive chains, including O-ring designs.
Price: $2.95–7 oz., $4.95–18 oz.

Dri-Slide Bike Aid
A molybdenum disulfide dry lubricant in a penetrating and evaporating carrier. Designed to lubricate while repelling dirt, road tar and moisture.
Price: $2.97–4 oz. spout, $4.95–4 oz. w/needle applicator, $4.68–5¼ oz. aerosol

Hi-Point Premium Chain Lube
A penetrating liquid that turns into a heavy grease after application. Claimed to be waterproof, to resist fling-off and to be safe for O-ring chains.
Price: $3.95–13 oz. (weight)

Klotz Chain Lube
Designed to lubricate and protect standard and O-ring chains, as well as sprockets, for both competition and touring applications.
Price: $4.37–15½ oz. (weight)

Klotz Chain & Clutch Lube
Contains graphite and an extra tackiness agent for added lubrication and reduced fling-off.
Price: $3.35–8 oz.

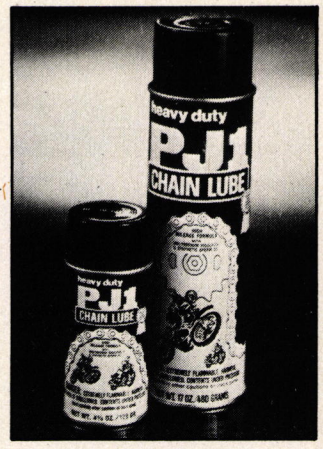
SPECIAL EDITION: LUBRICANTS AND ADDITIVES

Lubri-Tech Foaming Chain Lube
Features a foaming/washing action which cleanses the chain while its lubricants penetrate.
Price: $2.75–3½ oz., $4.50–17 oz.

Lubri-Tech O-Ring Chain Lube
Non-petroleum lubricant for pre-lubed O-ring chains. Synthetic base helps extend life of neoprene O-ring seals for lasting protection.
Price: $3.50–17 oz.

Montec "O"-Ring Chain Lube
Formulated to keep O-rings flexible for greater service life. Designed to penetrate and lubricate internal bearing areas and protect surfaces against corrosion.
Price: $4.95–10 oz. (weight)

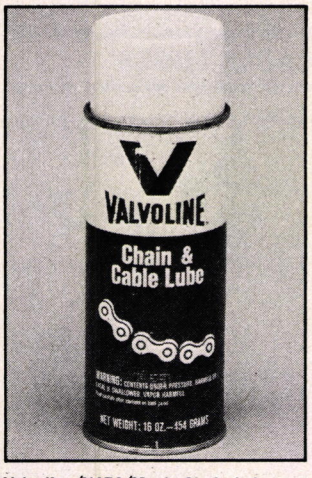
Montec Formula 2 Chain Grease
Sprays on as 10-weight penetrating oil and sets to a high-density 620-weight grease within minutes.
Price: $4.95–10 oz. (weight)



PJ1 Heavy Duty Chain Lube
Formulated for the demands of street, touring and off-road cycling. A blend of lubricants that penetrates, then thickens into a protective film.
Price: $1.98–4½ oz., $4.22–17 oz.

Lubri-Tech Competition Chain Lube
Formulated to work under extreme pressures, and with water-resistant characteristics for protection under all high-speed and hot running conditions.
Price: $3.50–6 oz., $4.75–17 oz.

Lubri-Tech Cable & Chain Spray-Lube
A multi-purpose blend designed primarily for lubricating chains or cables, but can be used anywhere a penetrating lubricant is required.
Price: $2.25–2 oz., $3.99–12 oz.



Valvoline/NAPA/Mac's Chain Lube
A combination of lubricants, corrosion-inhibitors, anti-wear additives and surface-active chemicals, dispersed in a penetrating solvent.
Price: $3.53–16 oz.

PJ1 Blue Label Chain Lube
Designed not to fling-off, while providing the necessary lubrication for extreme demands. A molybdenum disulfide base with rust- and corrosion-inhibitors.
Price: $3.29–8 oz., $5.49–18 oz.

PJ1 Blue Label O-Ring Chain Lube
Similar in design and claims to regular Blue Label lube, but blended to preserve the life of rubber O-rings.
Price: $3.29–8 oz., $5.49–18 oz.

Lubri-Tech Off-Road Chain Lube
Compounded to provide protection without dirt build-up for dirt-bike chains. A molybdenum disulfide base with penetrating action.
Price: $4.50–17 oz.

Maxima Chain Guard
Formulated for off-road, high-performance chain lubrication. Contains additives to prevent fling-off, rust and corrosion.
Price: $4.89–20 oz.

Oilzum Motorcycle Chain Lubricant
Compounded to minimize friction, rust and fling-off.
No manufacturer's suggested retail price.

Petrochem Chain Life
Formulated for both conventional roller and O-ring chains. Dispenses in a foam to reduce waste and overspray. Available in both aerosol form and in "one-shot, pillow pack" applicator packs.
Price: $2.50–five ¼ oz. bags, $2.50–7 oz., $4.50–17 oz.

Spectro Chain Lube
Designed to resist thinning due to heat, oxidation and rust. Formulated with aluminum-complex grease, heavy petroleum oil, tackiness agents and wetting agents.
Price: $2.60–8 oz. bottle, $3.95–13 oz. cans

VHT Chain Lube
A dry lubricant that is applied with an evaporating, penetrating carrier. Designed to resist dirt build-up.
Price: $2.48–8 oz., $3.21–16 oz.

Torco Power Slide Chain Lube
A penetrating molybdenum disulfide-based lubricant designed not to fling-off, and to help resist rust and water. Available in both bottle or can form.
Price: $1.50–4 oz., $4.75–32 oz., $1.50–5 oz. spray

Yamaha Chain Lube
A penetrating blend of lubricants and corrosion-inhibiting additives designed not to fling-off. Suitable for use on both standard roller and O-ring chains.
Price: $3.95–14 oz.

CABLE LUBES

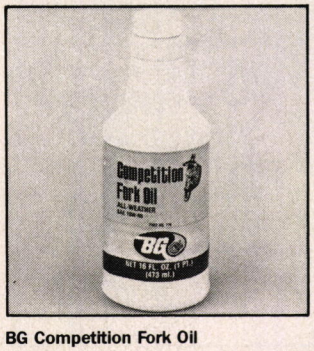
Dri-Slide Bike Aid
A molybdenum disulfide dry lubricant that is applied in a penetrating and evaporating carrier.
Price: $2.97–4 oz., $4.95–4 oz. w/needle applicator, $4.68–5¼ oz. aerosol

Freedom Cable Lube Kit
A Teflon-base penetrating lubricant designed for use on all cables. Kit includes a clamp-on applicator tool which forces lubricant into the cable housing under pressure.
Price: $12.95–5¼ oz. can w/applicator tool, $9.95–tool alone

Lubri-Tech Cable & Chain Spray-Lube
Formulated for use on cables and chains, but can be used as an all-purpose lube as well. Designed to inhibit rust and to free sticky cables.
Price: $2.25–2 oz., $3.99–12 oz.

Petrochem Cable Life Cable Care Kit
Designed to lubricate cables and other moving parts. Included application tool allows lubrication of cables under pressure to assure penetration.
Price: $12.00–11¾ oz. with applicator tool, $10.00–tool alone

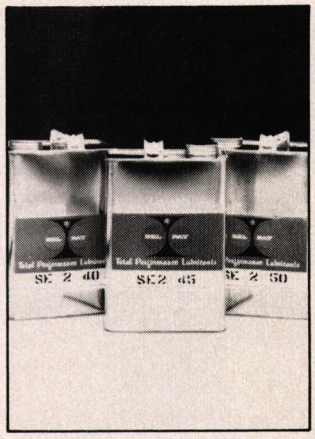
SUSPENSION OILS



BG Competition Fork Oil
A multi-grade lubricant blended to provide uniform damping throughout a wide range of operating conditions and temperatures. Available in 10W-40 only.
No manufacturer's suggested retail price

Bel-Ray Fork Oil
Formulated to prevent oxidation and sludging in modern suspension units. Contains a "Seal Swell" agent to control seal expansion without seal deterioration. Designed primarily for street use. Available in 5- through 30-weight.
Price: $2.25–16 oz.

Bel-Ray LT Racing Suspension Fluid
Engineered to meet or exceed racing demands by maintaining a stable viscosity and providing consistent damping quality. Available in 5- through 20-weight for off-road use.
Price: $2.95–16 oz.

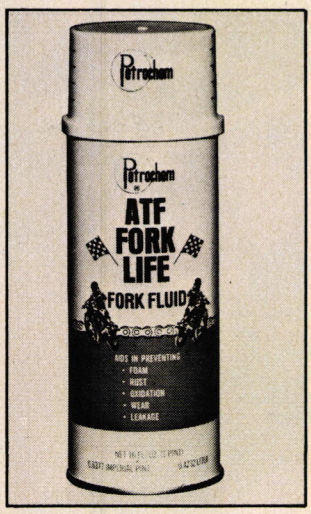


Bel-Ray Synthetic Suspension Fluids
Utilizes synthetic hydrocarbons and selected esters. Designed to hold up under severe racing conditions. Available in 2½- through 20-weight.
Price: $11.50–32 oz., $41.65–gallon

SPECIAL EDITION: LUBRICANTS AND ADDITIVES

Hi-Point Premium Fork Oil
Claimed to offer superior lubricating and damping characteristics in hard use. Additives are incorporated to limit seal friction, foaming and to protect seals. Available in 5- through 20-weight.
Price: $2.95–32 oz.

Maxima Fork Oil
A blend of ingredients formulated to prevent foaming, reduce seal friction and protect seals. Special "Lubricinol" formula helps retain viscosity throughout a wide temperature range while inhibiting corrosion.
Price: $2.89–16 oz.



Petrochem ATF Fork Life
Formulated to aid in preventing foam, rust, wear and leakage. Available in 10- through 40-weight.
Price: $2.25–16 oz.

Torco Fork Oil
Designed to protect working parts, with anti-galling and scuff-proofing qualities. Available in a special 5-weight for both forks and shocks, as well as four grades in 10- through 30-weight for forks.
Price: $1.79–16 oz.

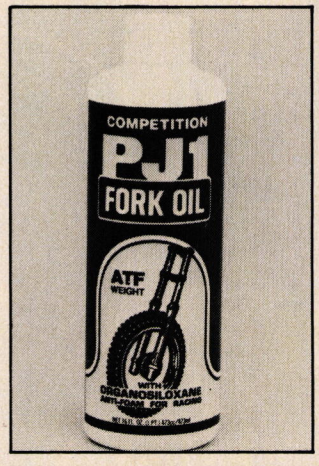
Kal-Gard Smooth Stroke Fork Oil
A high-molybdenum-content, non-foaming compound designed to reduce fork seal friction and to provide consistent damping under riding and racing conditions.
Price: $3.40–16 oz.

PJ1 Competition Fork Oil
Designed to maintain the same viscosity when used in a wide variety of temperatures, while helping to promote seal life and reduce fork wear. Contains molybdenum disulfide and "Organosiloxane" to resist foaming and wear. Available in 2½- through 30-weight.
Price: $2.75–16 oz.

Spectro Fork Oil
Blended with additives to reduce seal friction, inhibit rust and prevent foaming.
Price: $1.95–16 oz.

Yamaha Fork & Shock Oil
Formulated with additives to help prevent wear, seal-cracking and rust. Designed for on- or off-road use. Available in 5- through 30-weight.
Price: $2.25–16 oz.

Lubri-Tech Fork & Shock Oil
Developed to promote seal life and to prevent foaming and gumming, while providing consistent damping throughout a wide temperature range. Available in nine different grades.
Price: $2.59–16 oz.



PJ1 Competition ATF Weight Fork Oil
Similar in properties and claims to standard PJ1 fork oil, but in a special ATF weight for specialized application.
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Spectro Suspension Fluid
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EDITED BY DAIN GINGERELLI

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LaPorte Leans On The Europeans

Old World racing gives new life to Danny LaPorte.

• Twelve months ago, Danny LaPorte, motocross racer, was washed up. Burned-out, as he described himself. At 24 he was considered over-the-hill for American motocross racing. The U.S. teams, he knew, preferred younger riders who were willing to take any chance to win.

So LaPorte re-evaluated his situation. He decided either to quit racing or go to Europe and contest the 250cc world championship. He chose the latter, and America gained its second MX world champion because of it.

Having encountered, and overcome, his racer's middle-age crisis, LaPorte feels he can objectively compare American racing and riders to the European GP scene. He believes the Yanks are much more aggressive: "They go out on a track and berserk it in order to win. But when an American rider burns out, the companies just go out and get another one. The Europeans don't ride like that. They don't ride over their heads."

LaPorte took the European strategy—that you must first finish to finish first—with him in his quest to keep the 250 world championship trophy in the Yamaha trophy case. It was no easy task, either; former world champion Georges Jobe was healthy, and his Suzuki was dialed-in for 1982.

There was another obstacle to overcome, too; because this was LaPorte's first season on the championship circuit, he wasn't yet familiar with the tracks. And as Brad Lackey and other Americans venturing Over There had discovered, continental courses are very different from the spit-and-polish tracks of America. But LaPorte learned that even though he was unfamiliar with the European natural-terrain tracks and their off-camber

Continued

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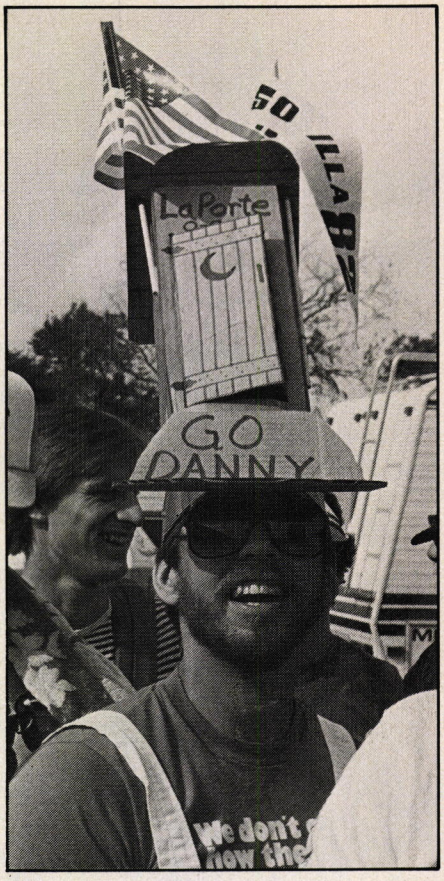
The showdown was inevitable: Danny LaPorte (11) versus Georges Jobe (2)

The newcomer kindly asked that the former champ step aside.



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LaPorte fan at Unadilla USGP

Americans come out of the closet.

turns, they suited his athletic constitution perfectly. They are *tough* tracks, physically and mentally taxing throughout a 40-minute-plus moto. They are also LaPorte's kind of tracks. As he explains it, "The tracks in Europe are so much better than the ones in the U.S. They put more emphasis on conditioning; they're hard, physical tracks and I like that. I like to go out and throw the bike around." Conversely, LaPorte counts on one hand the American tracks he likes. "The rest (of the American tracks)," he states, "are graded and become one-line tracks that are hard to pass on."

LaPorte didn't just waltz into Europe and announce he was going to take home the trophy. You don't do that. He worked hard, riding in international races to learn how to de-

Continued

Bad Brad Brings Home The Bacon

• It took 11 years, but Brad Lackey finally did it: He won the 500cc motocross world championship, becoming the first American to win an MX world title.

Lackey's GP career has been colorful, to say the least. He's ridden for several marques, starting with Husqvarna when he was 17 years old. Eventually, Lackey had factory rides with Honda, Kawasaki and, this year, Suzuki. His competitors over the years read like a Who's Who of Motocross; Lackey has gone head-to-head with Roger De Coster, Heikki Mikkola, Graham Noyce and Andre Malherbe.

But this was Lackey's year. The 500cc title chase went to the final moto of the season at the Luxembourg GP. His 2-3 day was enough to give him a season total of 228 points, 11 more than teammate Andre Vromans.

Will Lackey be back next year? He says yes, if Suzuki wants him. It seems a safe bet that he'll be back—and still competitive. Sure, he's already 28 years old, but Roger De Coster only started winning when he was 27. And we all know what happened once he acquired *that* habit.

—Dain Gingerelli

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LaPorte busting a European berm on his air-cooled Yamaha 250

They are physical tracks—Danny LaPorte-style tracks.

velop the Yamaha for the new types of tracks he'd race on. At first he stuck to the proven formula that won him the 1979 500cc National Championship: short—by contemporary motocross standards—suspension travel and quick steering for his bike.

But after testing, and some positive results from the engineers, he found that his method didn't work on the more rugged tracks against seasoned veterans. So he followed the engineers' advice and switched to long suspension. Immediately he gained favorable results, and by midsummer was in the driver's seat for the 250cc crown.

He also was in top physical shape, thanks to a conditioning program supervised by former 500cc world champion Heikki Mikkola. "Heikki Mikkola not only helped my conditioning," LaPorte points out, "he gave me a lot of confidence, too. It's a main reason I did so well."

With a better understanding of GP racing, and by following Mikkola's program, LaPorte now feels he has *years* left in his motocross career. And although he still has the California surfer look, there's something distinctly European about his attitude. He *wants* to continue GP racing, doing what the Europeans do. "They look at motocross riding as a long-term career. The Europeans want to race into their 30s. So do I." *—Dain Gingerelli*
Reported by Tom Riles.

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Mikkola tutors LaPorte at Finnish GP

The lessons paid off.

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LaPorte after winning Dutch GP

Next stop: The world.

Continued

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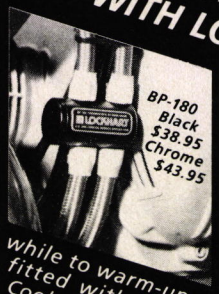

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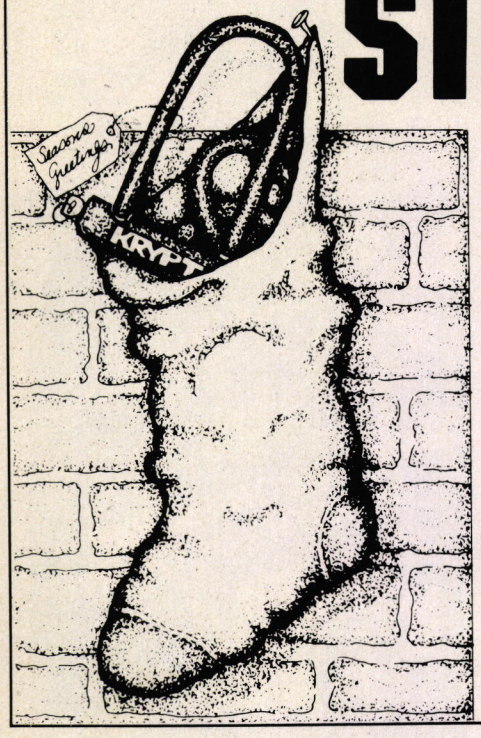

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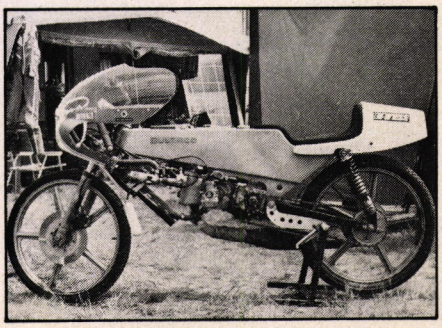
• Little motorcycles are cute. But cute, according to American racing lore, has nothing to do with a racebike; speed and power do. Not surprisingly, then, under-250cc race machines are considered toys over here. However, that isn't the case in Europe, where *every* displacement class is taken seriously.

The tiddler class is big-time on the GP world championship circuit. Most teams use either Bultaco or Kreidler engines, while their chassis designs vary. Both engines use disc-valve induction, liquid-cooled cylinders, and small, electric water pumps. Putting 50cc racing into a perspective that Americans might understand, the Bultaco redlines at 15,000 rpm, while the West German-built Kreidler

Ricardo Tormo tiddling at Assen

On his way to a teapot racing party.



Monocoque chassis, Bultaco power

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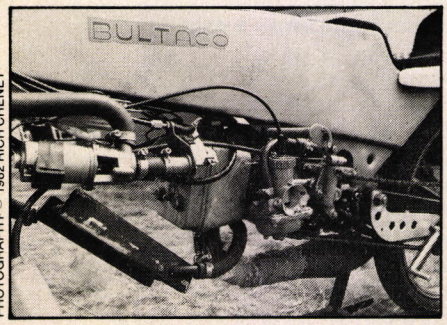
spins to 17,000-plus. Depending on the particular bike, speeds can reach 125 mph.

Since its inception in 1962, there have been several big-name racers in 50cc roadracing, but no one has been more successful than Angel Nieto. The diminutive Spaniard has won six championship titles.

The 50cc class originally was formed as a battleground for the European factory teams and the Honda and Suzuki newcomers. Competition was fierce throughout the Sixties, producing such techno-marvels as multi-cylinder engines with 12-speed transmissions. Before the FIM initiated the single-cylinder rule in 1968, Suzuki even had a prototype three-cylinder ready for combat.

But the Euro-Nippon battle looks as if it will resume in 1984 with the new FIM 80cc tiddler class, intended to entice the Japanese back into teapot competition. And with the ante upped, the stakes become higher and the speeds increase. Maybe then Americans will want to join the party. —*Dain Gingerelli*



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Liquid-cooled 50cc buzz-bomb

Nothing littler than a tiddler.

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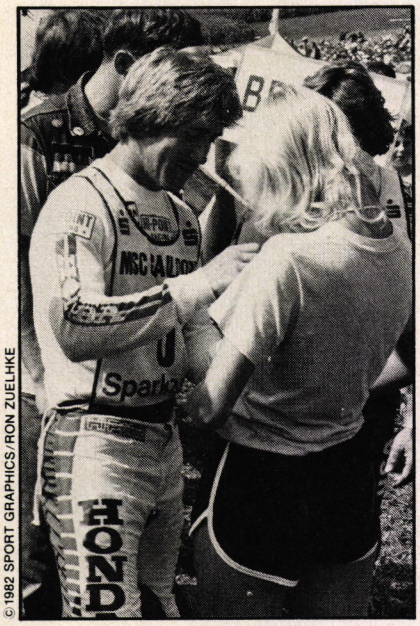

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Danny Chandler a hit with the fans

Purportedly signing her T-shirt. . . .

• The Second Coming: European motocross racers had a prophecy about this year's Trophee and Motocross des Nations. It went something like this: The Americans would return, and they'd get their red, white and blue sidecovers blown off. Well, part one proved true; the Americans returned. It was a quartet from American Honda that again comprised the United States entry. Most of the leading cast were new—Johnny O'Mara was the only returning letterman. New team members included USGP-winner Danny Chandler, Jim Gibson and alternate David Bailey, filling in for Donnie Hansen, who was injured in practice. And as in the past, the team arrived in Europe under the auspicious care of Roger De Coster. But part two of the prophecy couldn't have been more wrong. The Americans won both events.

Chandler was superb. He won *all four motos,* the first time in tournament history that had been done. The rest of the team did its share, too, and America walked away with the gold. The Belgian team placed second in both events.

• Troops dismissed: There was a minor rebellion in the motocross ranks. Honda, Yamaha and Suzuki withdrew factory entries from the Trans-USA, leaving only Team Green to give color to the fall series.

The distributors refused to comment officially on their withdrawal, but according to the race-grapevine, they boycotted the series for several reasons. The major complaint heard was that the Trans-USA made the MX season too long, and interfered with interim testing of new models for the following year. The boycott also was linked to budget problems, and as a possible indirect retaliatory measure to protest the AMA dropping the current 125/250/500cc National format in favor of the 250/500cc Grand National Championship for 1983.

• Trans-USA Finale: While the factory teams quibbled over the GN series and the Trans-USA, the fall classic was entering the autumn of its life, anyway, because 1982 will be its final year. After 12 seasons, the series that was born to attract European stars to American tracks has been dropped to pave the way for the GN championship.

• Give the man a gold stopwatch: There's going to be a change in the AMA directory; Professional Racing Director Mike DiPrete submitted his resignation, effective December 31, 1982. DiPrete will, however, remain as a consultant to the AMA in international activities, serving on the FIM motocross committee as the United States representative.

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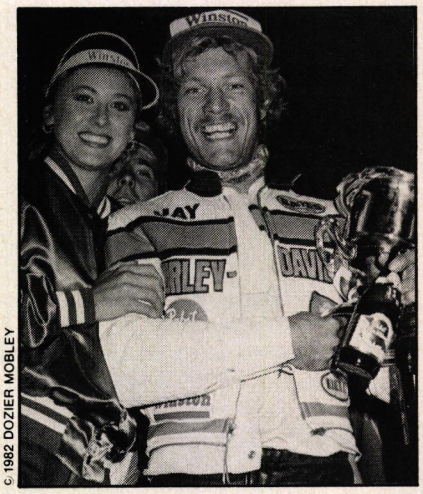
AMA racers make the jump to Camel

Winston tasted good.

• Change the stationery, too: R.J. Reynolds Tobacco Co. announced that the AMA Grand National Championship—flattrack-style—will be sponsored by Camel cigarettes for 1983. R.J. Reynolds, maker of Winston *and* Camel brands, turned over a new leaf for 1983 because, as company spokesman Gerald Long stated, "With a return to Camel sponsorship, American motorcycle racing will become part of an international image Camel has built for the sport through its European Camel Challenge motorcycle racing."

• Bingo for Baldwin: When Mike Baldwin won the Sears Point National last August, he wrapped up his second United States Road Racing Championship, too. Baldwin could be considered the comeback rider of the year, as this was his first full season in AMA roadracing since his 1979 accident at Loudon. But perhaps the biggest surprise for 1982 was his teammate, rookie Steve Wise, who finished second in the F1 standings, proving that he can, indeed, go fast both on and off pavement. Wes Cooley rounded out the top three, making it a clean sweep for four-strokes in a series that used to be a Yamaha two-stroke benefit.



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Springer is back

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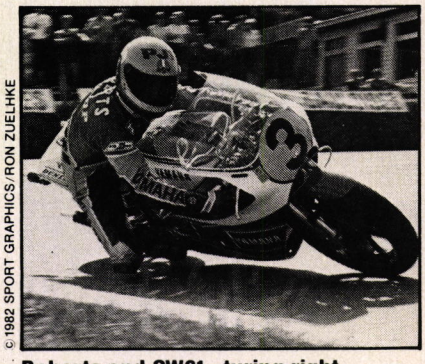
• Fall forward, Springer back: There's just no daylight for the competition when Jay Springsteen is healthy, and he appears to be in top form—again. This time he took no prisoners at the Indy Mile, winning by more than one-half lap. The Indy massacre also gave Springsteen more wins than anyone for AMA Miles—one more than either Joe Leonard or Hank Scott.

—Dain Gingerelli



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Roberts and OW61—turing right

Handlebar and seat remain the same.

• Quote Department: Kenny Roberts looks at his factory OW-racers as motorcycles—nothing more. When asked how he felt about the 1982 mid-season change from a square-four to the vee-four, he replied: "Well, it's still got handlebars and a seat. It doesn't matter what configuration makes everything happen; it all depends on what the handlebars do, and if it goes left and right." *—T.J. Rafferty*

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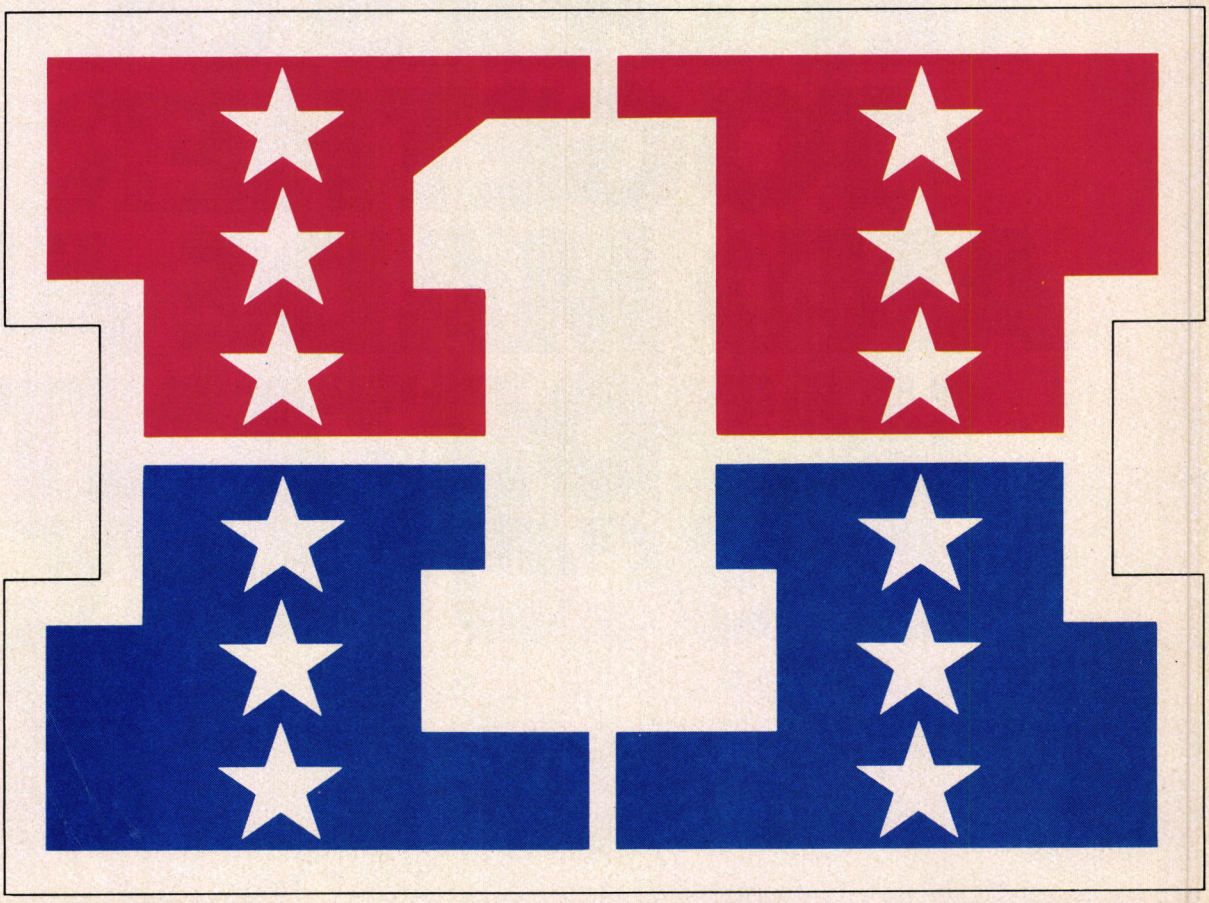

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Because when the starting gate dropped, so did the jaws of fifty thousand spectators. As they watched Team USA's Danny Chandler zoom through England, Germany and Belgium and wind up in the winner's circle.

With back to back wins in both motos.

Not only is this an unusual accomplishment, it's exactly what he accomplished one week earlier in the equally competitive Trophee des Nations. Making him the first person in history to win all four motos in these two races.

Of course, he couldn't have done it alone. And thanks to David Bailey, Johnny O'Mara and Jim Gibson, he didn't have to.

Against determined opposition, they racked up enough great finishes to make the United States the world champion of motocross for the second year in a row.

At Honda we're proud of the contribution we've made toward this incredible achievement. Both in machines and riders.

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It's gratifying in another way, too.

After years of following Europe, it's awfully nice to be leading for a change.

HONDA

FOLLOW THE LEADER

Winners & Losers

Speedway World Final

A run on the Coliseum; The last curtain call; Carter carnage; A red day in Moscow.

PHOTOGRAPHY ©1982 DAVID DEWHURST

Trophy queen ponders Penhall kiss

Thinking of grandeur times?

If he's sideways, it's Moran

Unorthodox and unique style.

• International speedway racing came to America August 29th when the World Final was held at the Los Angeles Coliseum. In fact, this was the first time the Final had been held outside Europe.

The host crowd had three things to cheer about: defending champ Bruce Penhall, teammate Kelly Moran and first-year man Dennis Sigalos. The rest of the 16-rider field read like the roster of the United Nations General Assembly. England led the international contingent with four men: Dave Jessup, Ken Carter and brothers Les and Peter Collins. Besides Penhall, Peter Collins was the only former world champion in the Final.

Other Western World delegates included Hans Nielsen (Denmark), Phil Crump (Australia), Jan Andersson (Sweden) and Georg Hack (West Germany).

Members from behind the Iron Curtain were (not necessarily in political order): Jiri Stancl and Vaclav Verner from Czechoslovakia, and Mikhail Starostin from Russia. Edward Jancarz represented Poland.

Although the 35,000-plus crowd was smaller than the promoters and FIM officials expected, the racing was still the same: 20 four-lap heats, with each rider competing in five events. Points were awarded in the usual manner: three for first place, two for second, one for third and zero for fourth. The evening went like this . . . .

Curtain Call

• "I must have gone through six rolls of toilet paper today." That was Bruce Penhall during the opening ceremonies. Obviously, he was anxious to get racing, proving that even the best racers get nervous.

And it appeared as though Penhall had psyched himself out, too. Penhall, who normally pilots his 160-pound, 60-horsepower bike off the line like a veteran drag-racer, was caught napping at the start of his opening heat. Les Collins got the important holeshot, and the Californian played catch-up for four laps. Collins exited Turn Four on the final lap to edge the defending champ, literally, by a wheel.

Penhall retaliated in his next heat, however, and his win set the stage for a showdown race against fellow American Sigalos and England's Jessup in Heat 12. All three had both a first and a second-place finish, so the winner of Heat 12 would be in good position to win it all. Penhall capitalized on the opportunity, paving the way for Showdown Number Two.

That was against Ken Carter, a feisty young rider who, going into Heat 14 against Penhall, had a perfect score. Penhall *needed* to beat Carter to at least save a tie. Ironically, both riders were last off the line. They bumped and nudged each other for third place and its one point. The feud ended when Carter drifted wide, bumping the specially built catch fence lining the track. The heat was red-flagged while corner workers untangled him. And then the controversy began.

The FIM officials ruled that Carter was to blame for the crash, and so he was disallowed from restarting with race leader Collins, Crump and Penhall. Carter, however, felt differently, charging that Penhall was to blame. He stormed the starter's gate and stood in front of it to delay the restart, facing physical removal from the infield by the security guards if he didn't step aside. Reluctantly he left and the heat was run without him.

Penhall won that heat, and subsequent ones, to retain his title. But on the victory podium he announced what everyone anticipated—his retirement. "This is my last race," he said, stepping down from one career and up to another.

So watch for him on the silver screen. He'll be easy to recognize; he's the blond, good-looking one—who gets a little nervous before curtain call.

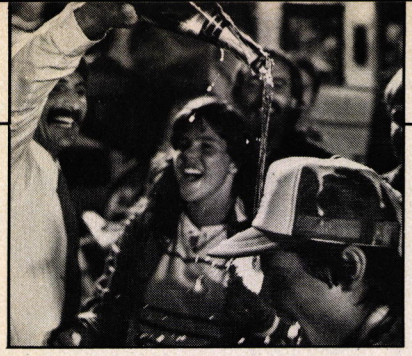
Carter Controversy Continued

• After the marshalls unraveled Carter from the Turn Two catch fence, the 35,000-plus crowd cheered. No one likes to see a racer hurt. And when the FIM officials announced he couldn't restart, everyone booed. No one likes to see a good racer black-flagged. But when Carter made a fuss and kicked dust at the starter's gate, even threatening to delay the show, the fans retaliated and booed him. No one likes a bad sport.

Carter took advantage of the ensuing pandemonium, grabbing the infield microphone at the start line and pleading with the crowd: "What was I supposed to do, shut off and let him pass me?" Now more cheering. Everyone likes a gutsy racer.

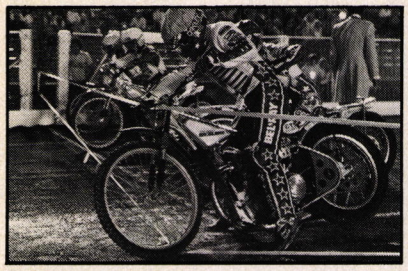
Later, Penhall gave his side of the story: "Kenny came underneath me," he explained, "and I leaned on him." He indicated the two bikes' relative positions through the turns. "Then I was clear of him," he added, "and I felt a tap." The tap was Carter just before he surrendered to Father Physics and hit the fence.

Penhall concluded: "What was I supposed to do, shut off and let him go by me?" Funny—sounds just like Carter.



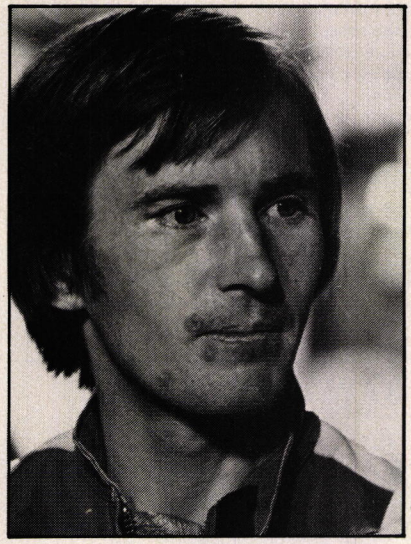
Brad Lackey douses Penhall

Champions and champagne.



Penhall calls his own shot

And almost tears the ribbon.



Russian rider Mikhail Starostin

Leaving America without the booty.

Lady Luck

• Winning racers generally are thankful. They thank their sponsors, their pit crews, their mechanics, sometimes even mom and dad. But, they all thank their lucky stars. At one time or another.

Bruce Penhall thanked his after the World Final. He obviously wasn't in the driver's seat for Heat 14 with Carter; Collins was out front and out of sight, while Penhall was busy dicing with Carter for third place and *one point.*

But the red-flag and restart gave the Southern Californian a second chance. He took advantage of it, getting his second wind to win. "I got lucky this year," he said. "Without the restart I could have dropped two points (had he not won)."

Penhall should be grateful for the pliable starting ribbon, too. He almost broke it for the start of Heat 12, a pivotal four-lap race for him, Sigalos and Jessup. Penhall outdrew the starter's hand, and left before the dual-ribbon gate had lifted. Luckily, he stopped before the ribbon snapped; according to FIM rules, a rider breaking the ribbon before it raises is automatically disqualified from the heat. Penhall rolled back and waited for the ribbon to rise. Then he won the heat.

Call the ribbon-affair luck. Call the heat-win skill.

Iron Curtain Call

• Russian speedway star Mikhail Starostin had a rough night at the Los Angeles World Final. His troubles actually began in Mexico City, when his bike and equipment—shipped via Cuba—were detained in Mexican customs. Officials there wanted to inspect *everything* Starostin was bringing through.

Consequently, Starostin's equipment didn't arrive in L.A. until Friday, one day before the race, limiting his practice time. Then on race day he lost his riding boots. None of the other racers had a pair of 7½ boots to lend him, and a plea was made over the public address system for anyone in the stands to lend Starostin some boots for the evening. A diplomatic fan stepped forward, and spent the remainder of the evening with cold feet.

Comrade Starostin's troubles weren't over yet. The partisan crowd booed him when announcer Bruce Flanders introduced him as the rider representing Russia. Then he was last off the line in the first heat, steadily losing ground until his engine expired for a DNF. To make matters worse, the FIM scoring system deletes a DNF-rider from the score sheet for that particular heat. So rather than scoring a zero for a fourth-place finish, Starostin got a slash mark, putting him in the red. He finally got on the sheet with a fourth-place finish in Heat 7. Points-wise he was still the same, but now he had a goose egg instead of a slash.

While the evening progressed, and it became evident that Starostin wasn't a threat to any of the three Americans in the Final—Penhall, Sigalos or Moran—the fans began to *cheer* for him. They went wild on his fifth and final heat—No. 19 against Penhall and Czechoslovakians Jiri Stancl and Vaclav Verner. Of course, the fact that Penhall needed this heat to win his second-in-a-row title had something to do with it, too.

But it just wasn't in Starostin's stars to score a point this year, and he left Los Angeles with a score of four zeros and a slash. But that's okay; he left behind a little goodwill—and a pair of size 7½ boots.

—Dain Gingerelli ●

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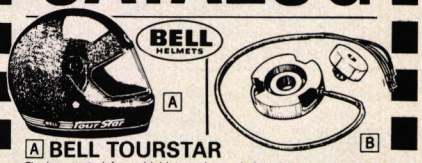

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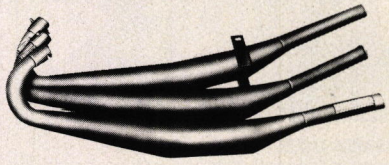

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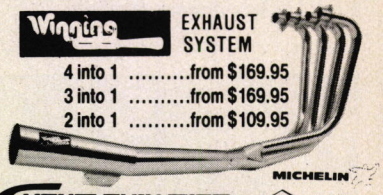

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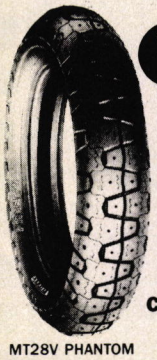

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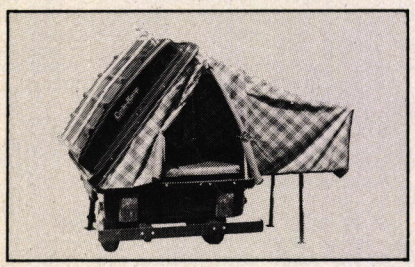

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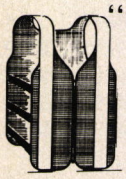
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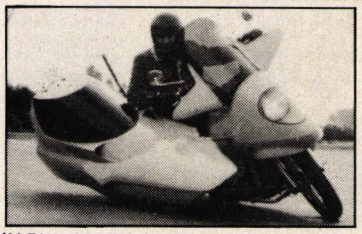
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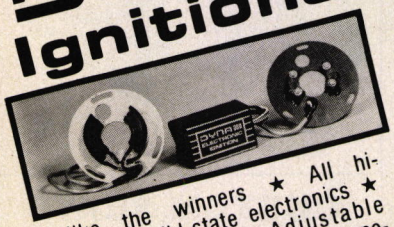
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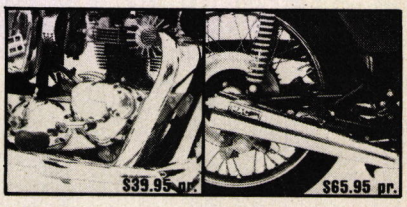
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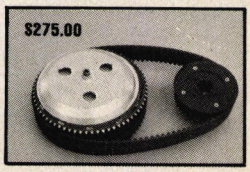
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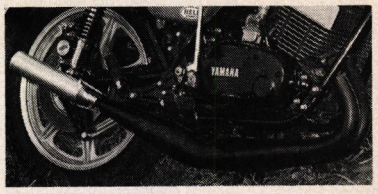

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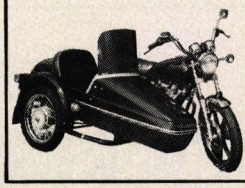

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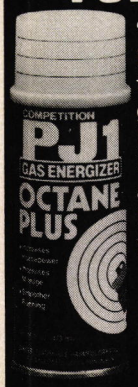

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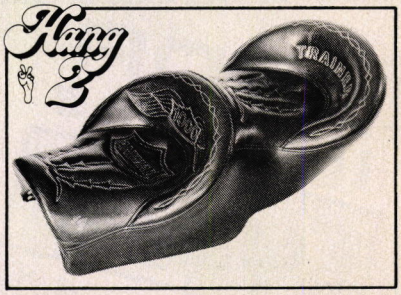

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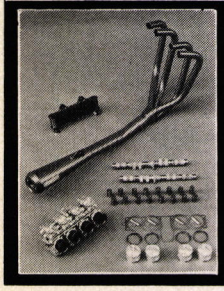

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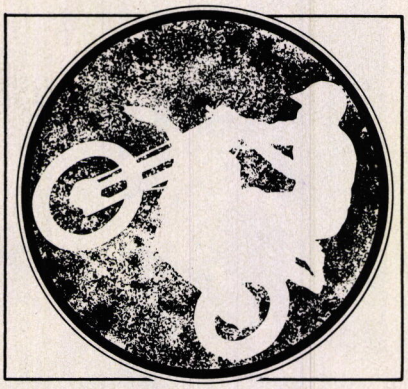
LETTERS

The motorcycle shell game, One right look and It all works out in the end.



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TWICE WRONG, SHAME ON YOU

Honda, please don't make the same mistake with the CBX400F that Yamaha made with its Euro-only XJ650 Seca. Remember the reluctance to bring that bike into the U.S.? Well, Yamaha was wrong, oh so wrong, and don't you follow suit. And don't worry about the CBX400F not being competitive in the market; there is nothing else available even remotely like this bike. You MUST bring it into this country. And keep it red and white, just like in the picture. It has to be that way.

G.A. Donaldson
Washington, D.C.

THE FRENCH CONNECTION

Don't you believe Honda when it says the CBX400F is destined for Japan only. I saw plenty of them when I was in Paris last August. The Honda shops not only had the CBX400, but the CBX550, too. And both bikes were available in two styles: the "plain" F model and the F2 version, with a factory fairing.

While I was in France I had a chance to look at all the other bikes offered by the Big Four; believe me, we're missing some really fine motorcycles here in the States. Machines like a CX500 with Pro-Link, rearsets and Turbo-style tank and seat, or a four-cylinder XJ400 Yamaha, also with rearsets, or RDs in four displacement sizes, or Katana 750s, or shaft-drive Kawasaki GPz750s.

Mark Dickey
Alameda, New Mexico

KIWIS TOO

The CBX400F is not for Japan only. When I left New Zealand in May these bikes already were in the shops. And they had both sizes, too; the CBX400 and the CBX550. According to what I hear from home, the 550 is fast but doesn't handle.

Mike Green
Renton, Washington

BILINGUAL BIKES

If Honda's CBX400F is really a Japan-only bike, why are all the instruments in English? Even the casting on the "Inboard Ventilated Disc" is in English. Is this common with all Japan-only bikes, or is the wool being pulled over our eyes?

Gerald Silvernale
Spokane, Washington

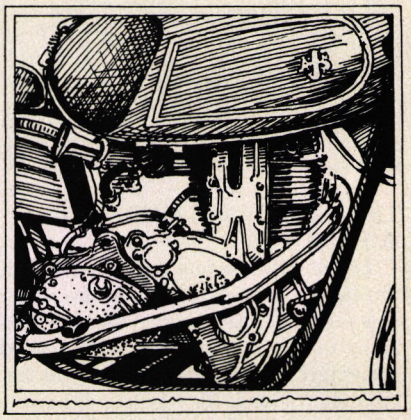
Answering your questions in order; 1) yes; 2) maybe—ed.

KINDRED SPIRITS

Hot damn, I'm not alone. I've been wishing out loud—to anyone who would listen—about my XR750-engined, FXRS-styled dream machine. James Bagley's letter (October '82) could make me believe in ESP.

My KZ1300 fills its touring role without a hitch, my GPz550 is so much fun it's probably illegal in some states and my YZ465 handles all the off-road chores I can throw at it; but something is missing in all of them. None of these machines have guts, character or style. I'm not looking for a hot-rod, just a machine that looks, feels and sounds alive. That 45-degree Harley engine may not be the ideal configuration for performance, but it's the only thing that fits in a motorcycle frame and looks like it belongs there.

Dan Carapellese
Glendale, Arizona



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NEWBORN TWINS

I enjoyed your September '82 tire test and appreciate the hard work and conscientious objectivity that went into it, but I would like to correct two misunderstandings about Continental's Conti-Twins.

The first concerns what your riders identified as a softness, or vagueness, under hard cornering. Rather than imperfection, this a deliberate design element in

Continued

LETTERS

the ContiTwins—what our engineers call the "warning zone." This sudden change in ride quality is intended to warn riders that they are reaching the limits of adhesion. It forgives their enthusiasm by giving them time to make corrections in speed, power or cornering radius *before* they lose control. This warning sensation is not a result of soft, overly flexible sidewalls.

The second point concerns the hardness of the Twin's tread compound. In fact, it is not hard at all. We invite you and your readers to feel it; you will find it has a nice, lively, sticky quality. Continental's engineers have developed a high-friction compound that also delivers outstanding mileage.

Your riders were perfectly correct, however, in identifying the ContiTwins as high-performance touring tires rather than ultimate high-performance street tires. For the latter, we have just introduced our new Continental SuperTwins. These are our top-of-the-line high-performance/high-mileage tires for the Eighties. They are available now, and we only regret that they were not introduced in time for your excellent test.

Arnold van Ruitenbeek
Vice President
Continental Products Corp.
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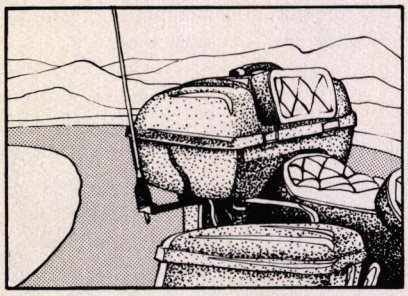

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THE INCREDIBLE SHRINKING MOTORCYCLE

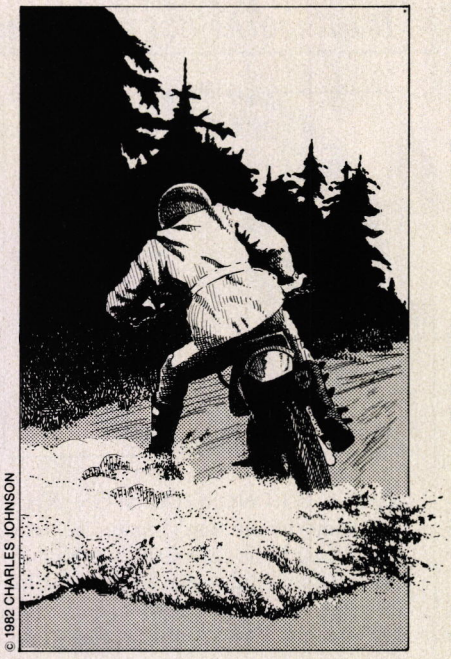
Just finished reading the fine article on tire testing (September '82). As the owner of a GPz550, I figured the results would apply to me, as well. However, I noticed something seriously wrong; one of the test bikes shown (page 23, foreground) had become a GPz550. My question: Did a certain set of tires cause this condition? If so, please advise; I don't want a GPz225.

Tom Fasoldt
Albany, New York

It's safe, none of the tires shrank the 1100. As for the 550, wouldn't you bring one to Laguna Seca as a playbike?—ed.

IF YOU LIKED THAT, TRY THIS

I was pleased to read the results of your



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September issue tire test. You see, for three years now I have been using the same Pirelli tire setup you picked as the winner, and yes, I have tried the rest. Here's the good news; I have just tried the new Pirelli Phantoms and they're even better than before, hard as that is to believe. You can tell the new ones apart by the +1 right next to the word Phantom on the tire's sidewall.

Try a pair and you'll see what I mean.

Robbie Radel
Orange, California

YES, BUT TELL THE KIDS OF TODAY

Anyone calling himself a motorcycle enthusiast needs two things: 1) a motorcycle; and 2) some knowledge about motorcycles, at least enough to sight-identify the legendary bikes of the past. I remember back in the late Sixties and early Seventies when I first became interested in motorcycles and I would read every bike magazine cover-to-cover as soon as it arrived. I was enthusiastic.

What prompted me to write this letter was a young man, maybe 19 or so, who pulled up next to me at a stoplight. He was riding a new Honda and when he drew up next to me at the light he gestured down toward the engine in my bike, nodded approvingly and said, "A Commando, huh?" Now that would have been fine, except I was on my 1971 Triumph Trophy 500. Do you suppose he subscribed to the same motorcycle magazines I did last year?

Normann
Klamath Falls, Oregon

HAIL, BRITTANIA

The Japanese motorcycle manufacturers change their designs almost yearly; they seem to follow any and every whim that comes along. Not the English; I ride a 650 Triumph Bonneville and its vertical-twin engine is pedigreed back to the Thirties. Improvement here, not outright change. I find that comforting.

Jerry Howell
Newport News, Virginia

WHAT ALMOST WAS

Being a sportscar buff, a flaming jackass and a motorcycle enthusiast, as well, I was sorry to hear about Lord Hesketh's troubles. Please do a story on what happened to that $8000 dream of his. What a pity, I thought red was such a smashing color on it.

Salty Hobbs
Newport, Rhode Island

But just think what it would have looked like in British Racing Green—ed.

CREDIT WHERE CREDIT IS DUE

How many people have pointed out the error in Steve Thompson's article (Hanford, California) where he mentioned the *Swedish* Nimbus motorcycle? That bike was made in Denmark.

S.A. Nelson
Los Oros, California

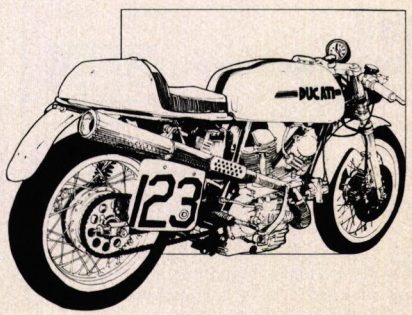
Two, including you—ed.

LIKE MOTHER LIKE SON

I can't believe you guys printed that guest editorial "Biker Ads." I'm an enthusiastic motorcycle owner who also owns what Ms. Kellogg calls, or alludes to, as S&M equipment. I'm also a non-self-destructive mother of two.

I love my sleek, full-face helmet and I love, beyond words, my leathers which once saved my knees and elbows in a blind curve with sand on the pavement. If every "Petey" wore protective gear there might be a few less injuries that give biking part of its bad reputation.

Personally, I think the black leather really turns on Ms. Kellogg and she can't admit that to herself. That's what has got



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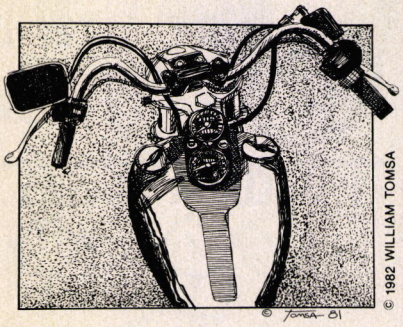
LETTERS



her so upset.

Denise Durant
Becket, Massachusetts

A FACE FROM THE PAST

Geez! Mary Alice, if you would have paid some attention to me instead of walking by with your nose in the air maybe things would have turned out differently. There was nothing I could do about my complexion, or my metabolism, honest. It was you, and others like you, that made me make up for a lack of companionship by spending time with my mechanical friend, my bike.

But I guess it really worked out for the best. I'm on TV now and I have plenty of money. Girls are no longer a problem. Mary Alice, I'm going to stay with my hot bikes and "S&M outfits" as you call them. And by the way, right after high school my face cleared up nicely.

Petey
Hollywood, California
(aka, A. Arapahae, Kamlcops, B.C.)

I'M MAD AS HELL AND I WON'T TAKE IT

Maybe things will change, and maybe I'll cool off in time, but right now (actually, this entire year of reading) I'm pretty sick of peg-scraping motorcycles and $15,000 economy cars. For those very reasons I have not re-upped with "Road & Track," "Car and Driver," "Cycle World" or your magazine. I can't blame you, though, because you don't directly control the manufacturers.

Greg Spicer
Rome City, Indiana

So why are you blaming us then?—ed.

NO NEWS IS GOOD NEWS

Why do you completely ignore the Suzuki GS850G? I've been waiting quite a while now for a good test on this machine, not just a "once over lightly." Is something wrong with this bike?

Del Aherns
Aledo, Illinois

Not at all. The 850G is just the strong, silent type—ed. ●

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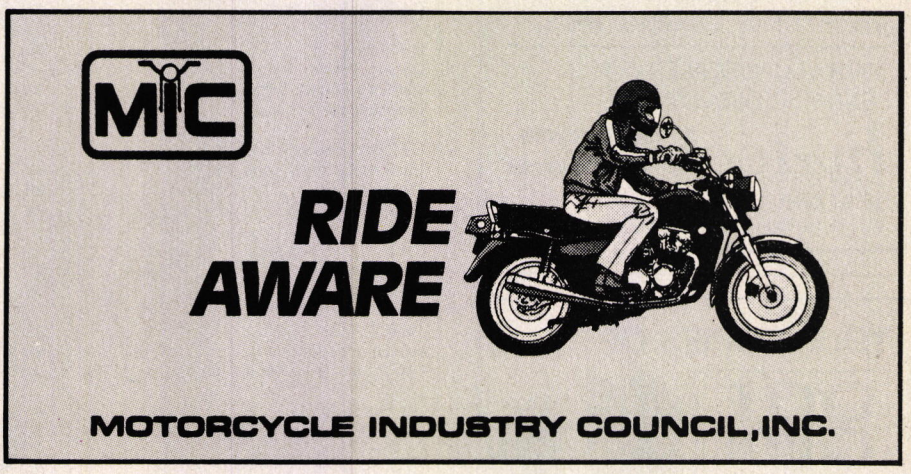

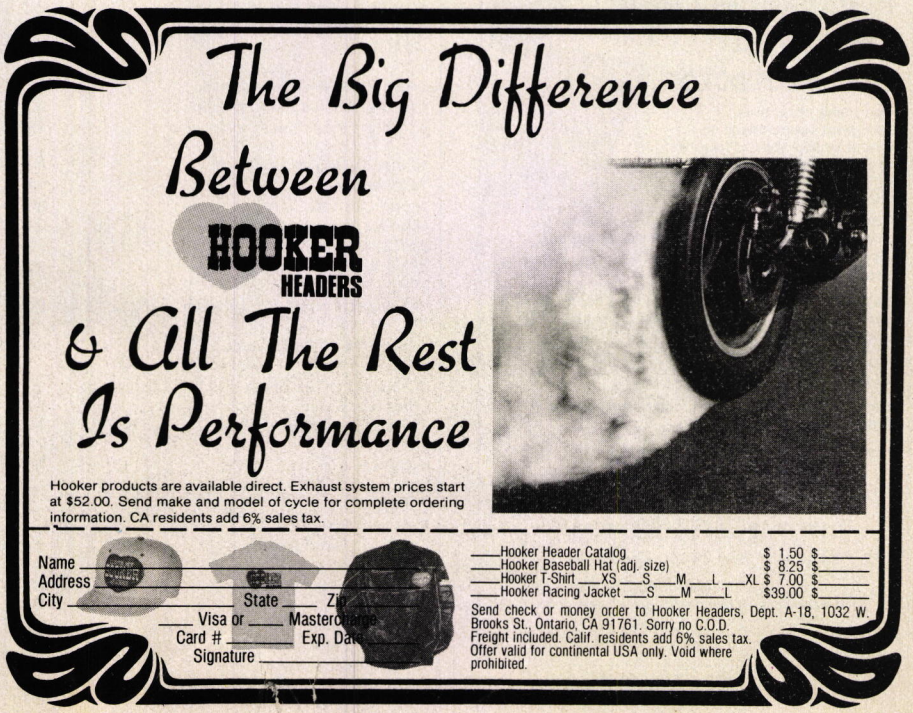
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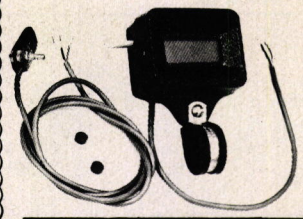

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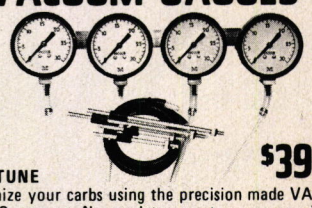

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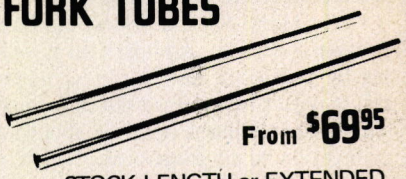

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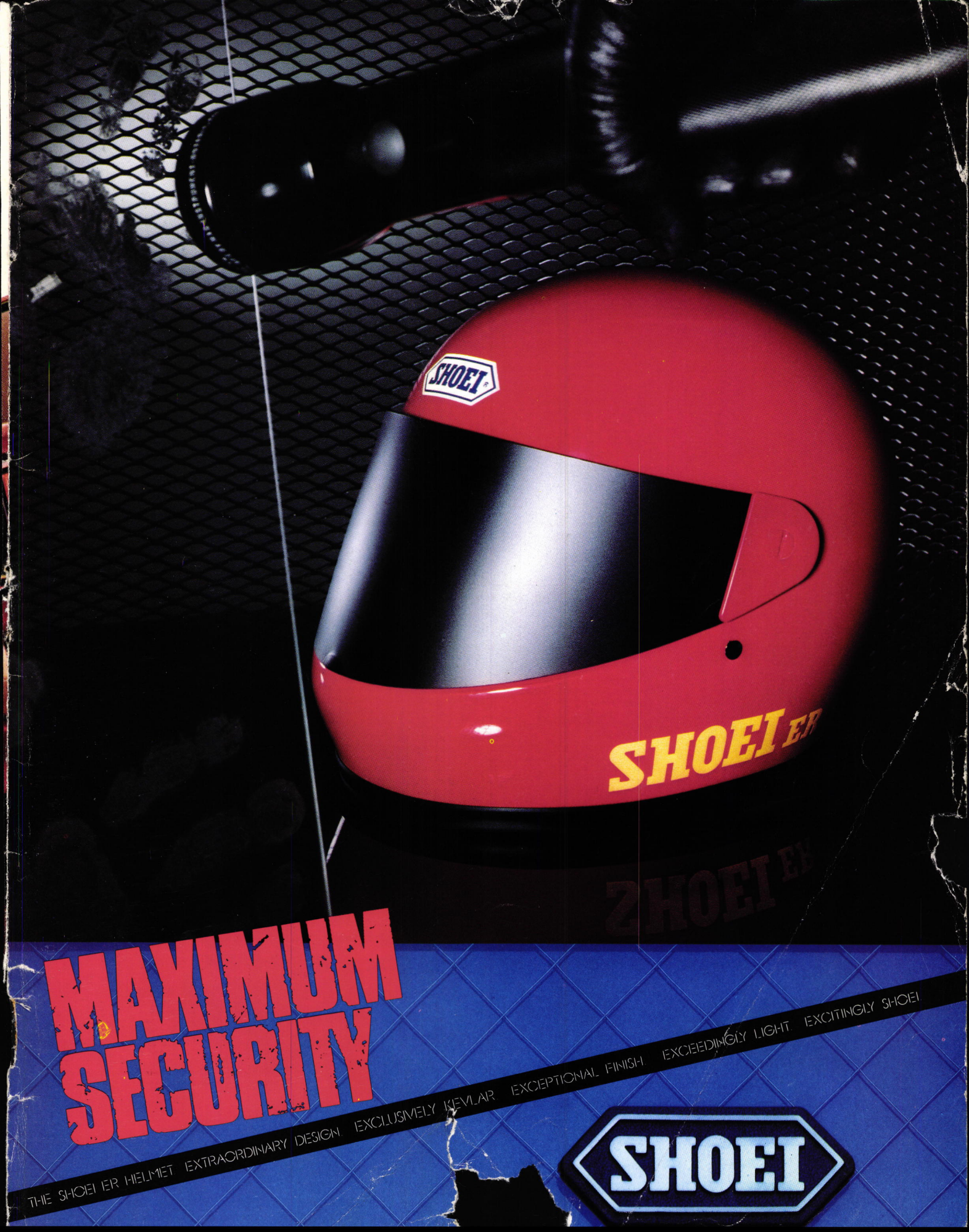

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